

## Asst. Prof. Alper ÇALIŞKAN

### Personal Information

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### International Researcher IDs

ScholarID: Akj80fgAAAAJ

ORCID: 0000-0002-4608-8023

Publons / Web Of Science ResearcherID: AAD-9541-2019

ScopusID: 55960486600

Yoksis Researcher ID: 43048

### Education Information

Doctorate, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, Turkey 2014 - 2019

Postgraduate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Elektronik Ve Haberleşme Müh., Turkey 2012 - 2014

Undergraduate, Yildiz Technical University, Elektronik Ve Haberleşme Müh., Turkey 2007 - 2011

### Foreign Languages

English, B2 Upper Intermediate

Japanese, A2 Elementary

### Dissertations

Doctorate, Reflectarray antenna design using artificial intelligence, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, 2019

Postgraduate, Geniş bantlı TEM ve ridged horn anten dizisi tasarımı, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, 2014

### Research Areas

Electrical and Electronics Engineering, Electromagnetic, Electromagnetic Waves, Antennas and Propagation, Passive Microwave Circuits, Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, 2022 - Continues

Research Assistant PhD, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication

Engineering, 2014 - 2022

## Courses

### Postgraduate

İleri Mikrodalga Pasif Devrelerin Gerçekleştirilmesi, I, Postgraduate, 2024 - 2025

Araştırma Yöntemleri ve Bilimsel Etik, Postgraduate, 2022 - 2023

### Undergraduate

Undergraduate, 2024 - 2025, 2019 - 2020

Occupational Health and Safety 2, Undergraduate, 2024 - 2025

Occupational Health and Safety 1, Undergraduate, 2024 - 2025

Numerical Solution Methods, Undergraduate, 2024 - 2025, 2020 - 2021

Electromagnetic Wave Theory, Undergraduate, 2022 - 2023

Mühendislik Matematiği, Undergraduate, 2020 - 2021

## Jury Memberships

Doctoral Examination, Doctoral Examination, Yıldız Teknik Üniversitesi, May, 2024

Doctoral Examination, Doctoral Examination, Yıldız Teknik Üniversitesi, May, 2024

Doctoral Examination, Doctoral Examination, Yıldız Teknik Üniversitesi, May, 2024

Doctorate, Doctorate, Yıldız Teknik Üniversitesi, January, 2024

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Partially dielectric loaded planar Vivaldi array antenna for forward-looking GPR applications**  
ÇALIŞKAN A., Hoşgör Y., TÜRK A. S., KIZILAY A.  
Microwave and Optical Technology Letters, vol.66, no.1, 2024 (SCI-Expanded)
- II. **Optimal design of transmitarray antennas via low-cost surrogate modelling**  
Belen M. A., ÇALIŞKAN A., Koziel S., Pietrenko-Dabrowska A., MAHOUTİ P.  
Scientific Reports, vol.13, no.1, 2023 (SCI-Expanded)
- III. **Rapid Design of 3D Reflectarray Antennas by Inverse Surrogate Modeling and Regularization**  
Koziel S., Belen M. A., ÇALIŞKAN A., MAHOUTİ P.  
IEEE Access, vol.11, pp.24175-24184, 2023 (SCI-Expanded)
- IV. **Highly Efficient Circularly Polarized Radial Line Slot Array Antenna Using Non-Uniform Slot Density for 5G Communication System**  
Cumurcu O., TORPİ H., ÇALIŞKAN A.  
IEEE Access, vol.11, pp.115688-115698, 2023 (SCI-Expanded)
- V. **3D EM data-driven artificial network-based design optimization of circular reflectarray antenna with semi-elliptic rings for X-band applications**  
ÇALIŞKAN A., GÜNEŞ F.  
MICROWAVE AND OPTICAL TECHNOLOGY LETTERS, vol.64, no.3, pp.537-543, 2022 (SCI-Expanded)
- VI. **Surrogate-Based Design Optimization of Multi-Band Antenna**  
Belen A., Tari O., MAHOUTİ P., Belen M. A., ÇALIŞKAN A.  
Applied Computational Electromagnetics Society Journal, vol.37, no.1, pp.34-40, 2022 (SCI-Expanded)
- VII. **Design Optimization of Ultra-Wideband Vivaldi Antenna using Artificial Intelligence**  
Mahouti P., Kızılçay A., Tari O., Belen A., Belen M. A., ÇALIŞKAN A.  
Applied Computational Electromagnetics Society Journal, vol.36, no.12, pp.1594-1601, 2021 (SCI-Expanded)
- VIII. **On Decomposition-Based Surrogate-Assisted Optimization of Leaky Wave Antenna Input**

### **Characteristics for Beam Scanning Applications**

Belen M. A., Mahouti P., Koziel S., Çalışkan A., Szczepanski S.  
IEEE ACCESS, vol.9, pp.161318-161325, 2021 (SCI-Expanded)

- IX. **A Novel Design of Non-Uniform Reflectarrays with Symbolic Regression and its Realization using 3-D Printer**  
Mahouti P., Güneş F., Belen M. A., Çalışkan A.  
APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY JOURNAL, vol.34, no.2, pp.280-285, 2019 (SCI-Expanded)
- X. **Axially displaced elliptical reflector antenna design with a switchable feeder for ultra-wide band applications**  
Kenan A. K., ÇALIŞKAN A.  
IET MICROWAVES ANTENNAS & PROPAGATION, vol.12, no.14, pp.2141-2148, 2018 (SCI-Expanded)
- XI. **Modeling and Realization of Cavity-Backed Dual Band SIW Antenna**  
Belen M. A., Mahouti P., Çalışkan A., Belen A.  
APPLIED COMPUTATIONAL ELECTROMAGNETICS SOCIETY JOURNAL, vol.32, no.11, pp.974-978, 2017 (SCI-Expanded)
- XII. **Horn antennas with enhanced functionalities through the use of frequency selective surfaces**  
Mahouti P., GÜNEŞ F., Belen M. A., ÇALIŞKAN A., Demirel S., Sharipov Z.  
INTERNATIONAL JOURNAL OF RF AND MICROWAVE COMPUTER-AIDED ENGINEERING, vol.26, no.4, pp.287-293, 2016 (SCI-Expanded)
- XIII. **Ultra-wide band antenna designs and numerical system modelling for forward-looking GPR**  
TÜRK A. S., Aksoy S., Keskin A. K., Senturk M. D., ÇALIŞKAN A., Ozakin M. B.  
NEAR SURFACE GEOPHYSICS, vol.13, no.3, 2015 (SCI-Expanded)

### **Articles Published in Other Journals**

- I. **A Low-Profile Hollow Waveguide Slot Array Antenna with Full-Corporate Feeding Network at K-Band**  
Yamaç Y. E., Çalışkan A., Türk A. S., Kızılay A.  
Advanced Electromagnetics, vol.11, no.2, pp.23-27, 2022 (ESCI)
- II. **Influence of 3d printing process parameters on the radiation characteristics of dense dielectric lens antennas**  
TOKAN F., DEMİR S., ÇALIŞKAN A.  
Progress In Electromagnetics Research C, vol.116, pp.113-128, 2021 (Scopus)
- III. **ISM Band Haberleşme Uygulamaları İçin Origami Anten Tasarımı**  
Çalışkan A., Kızılay A., Belen M. A., Mahouti P.  
European Journal of Science and Technology, vol.2019, no.16, pp.785-791, 2019 (Peer-Reviewed Journal)
- IV. **Subsurface and through-wall SAR imaging techniques for ground penetrating radar**  
ÜNAL M., Caliskan A., Turk A. S., Ozkan Bakbak P.  
Technology and Design in Electronic Equipment, vol.37, no.6, pp.32-36, 2013 (Peer-Reviewed Journal)
- V. **Impacts on Subsurface and Through-Wall SAR Imaging Techniques for Ground Penetrating Radar**  
Çalışkan A., TÜRK A. S.  
Technology and Design in Electronic Equipment (TKEA), vol.37, no.6, pp.32-36, 2013 (Peer-Reviewed Journal)

### **Papers Published in Refereed Scientific Meetings**

- I. **RADIAL LINE SLOT ARRAY ANTENNA DESIGN FOR MICROWAVE LINKS**  
Cumurcu O., Çalışkan A., Torpi H.  
11. ULUSLARARASI MÜHENDİSLİK MİMARLIK VE TASARIM KONGRESİ, 10 - 12 June 2023, pp.1454-1455

- II. **DİELEKTRİK LENS KULLANIMI İLE HORN ANTEN PERFORMANSININ İYİLEŞTİRİLMESİ**  
Turan U., Türker Tokan N., Çalışkan A.  
ULUSLARARASI MÜHENDİSLİK MİMARLIK VE TASARIM KONGRESİ, İstanbul, Turkey, 22 - 24 June 2022, no.152, pp.1-4
- III. **Circularly Polarized Corrugated Horn Fed Nonuniform Reflectarray Antenna**  
Çalışkan A., Güneş F., Serdar Turk A.  
2020 IEEE Ukrainian Microwave Week, UkrMW 2020, Virtual, Kharkiv, Ukraine, 21 - 25 September 2020, pp.213-216
- IV. **Waveguide Slot-Fed Horn Antenna Array with Suppressed Sidelobes**  
Yamaç Y. E., Çalışkan A., Türk A. S., Kızılay A.  
Signal Processing Symposium, Krakow, Poland, 16 - 19 September 2019
- V. **24 GHz short range radar system measurements for synthetic aperture radar imaging**  
ÇALIŞKAN A., YAMAÇ Y. E., UYSAL H., TÜRK A. S., KIZILAY A., Orhan M.  
2017 IEEE Microwaves, Radar and Remote Sensing Symposium (MRRS), Kiev, Ukraine, Ukraine, 29 - 31 August 2017, pp.285-287
- VI. **Design of displaced and circular polarized Waveguide Slot Array antenna with dielectric for K-band radar application**  
Cumurcu O., ÇALIŞKAN A., YAMAÇ Y. E., TÜRK A. S.  
18th International Radar Symposium, IRS 2017, Prague, Czech Republic, 28 - 30 June 2017
- VII. **Experimental study of human respiratory detection using UWB GPR**  
Büyükhhan C., Karamzadeh S., Orhan M., ÇALIŞKAN A., Cilesiz I.  
4th International Conference on Electrical and Electronics Engineering, ICEEE 2017, Ankara, Turkey, 8 - 10 April 2017, pp.314-317
- VIII. **BACKGROUND SUBTRACTION TECHNIQUES TO DETECT HUMAN VITAL SIGNS USING UWB GPR**  
BÜYÜKHAN C., KARAMZADEH S., ÇALIŞKAN A., Orhan M., CİLESİZ İ.  
International Conference on Advanced Technology & Sciences, İstanbul, Turkey, 09 May 2017, pp.1-2
- IX. **High Resolution Signal Processing Techniques for Millimeter Wave Short Range Surveillance Radar**  
Türk A. S., Kızılay A., Orhan M., Çalışkan A.  
IRS 2016 - 17th International Radar Symposium, Krakow, Poland, 10 - 12 May 2016
- X. **Coplanar Stripline-Fed Microstrip Yagi-Uda Antenna for ISM Band Application**  
ÇALIŞKAN A., GÜNEŞ F., Belen M. A., Mahouti P., Demirel S.  
21st International Conference on Microwave, Radar and Wireless Communications (MIKON), Krakow, Poland, 9 - 11 May 2016
- XI. **Design of Dielectric Lens Loaded Double Ridged Horn Antenna for Millimetre Wave Application**  
Demirel S., ÇALIŞKAN A., Mersin M. T., TÜRK A. S., Belen M. A., Mahouti P.  
21st International Conference on Microwave, Radar and Wireless Communications (MIKON), Krakow, Poland, 9 - 11 May 2016
- XII. **Microstrip SIW Patch Antenna Design for X band Application**  
Belen M. A., GÜNEŞ F., ÇALIŞKAN A., Mahouti P., Demirel S., YILDINM A.  
21st International Conference on Microwave, Radar and Wireless Communications (MIKON), Krakow, Poland, 9 - 11 May 2016
- XIII. **Design and Realization of Dual Band Microstrip Monopole Antenna**  
Mahouti P., GÜNEŞ F., Belen M. A., ÇALIŞKAN A., Demirel S.  
21st International Conference on Microwave, Radar and Wireless Communications (MIKON), Krakow, Poland, 9 - 11 May 2016
- XIV. **Design of a Multiband Microstrip Patch Antenna with Defected Ground Structures (DGS)**  
ÇALIŞKAN A., Belen M. A., MAHOUTİ P., DEMİREL S., GÜNEŞ F.  
European Microwave Week (EuMA), Paris, France, 07 September 2015, pp.1387-1390
- XV. **PSO Algoritması ile Çok Katmanlı Algılayıcı Ağ Mimarisinin Belirlenmesi**  
ÇALIŞKAN A., ÇİMEN S., YILDIRIM T.  
Akıllı Sistemlerde Yenilikler ve Uygulamaları Sempozyumu, Turkey, 9 - 10 October 2014

- XVI. **Analog Signal Processing for UWB Sounding**  
Ruban V., Shuba O., Pochanin G., Türk A. S., Keskin A. K., Şentürk M. D., ÇALIŞKAN A.  
Proc. Of 7th International Conference on Ultra Wideband and Ultra Short Impulse Signals, Kharkiv, Ukraine, 01 September 2014, pp.55-58
- XVII. **Development of Signal Processing Techniques for Through-Wall Imaging Radar Systems**  
Unal M., TÜRK A. S., ÇALIŞKAN A., Orhan M., Ozdemir M.  
20th International Conference on Microwaves, Radar, and Wireless Communication (MIKON), Gdansk, Poland, 16 - 18 June 2014
- XVIII. **UWB compact TEM ridged horn antenna**  
Keskin A. K., Senturk M. D., ÇALIŞKAN A., TÜRK A. S.  
30th Annual Review of Progress in Applied Computational Electromagnetics, ACES 2014, Florida, United States Of America, 23 - 27 March 2014, vol.2014-January, pp.114-118
- XIX. **Compact partially dielectric loaded ridged horn antenna**  
Keskin A. K., Senturk M. D., ÇALIŞKAN A., TÜRK A. S., DEMİREL S.  
30th Annual Review of Progress in Applied Computational Electromagnetics, ACES 2014, Florida, United States Of America, 23 - 27 March 2014, vol.2014-January, pp.110-113
- XX. **Impacts on signal processing techniques for ground penetrating radar**  
ÜNAL M., ÇALIŞKAN A., TÜRK A. S.  
2013 Signal Processing Symposium, SPS 2013, Serock, Poland, 5 - 07 June 2013

## Other Publications

- I. **Geniş Bantlı TEM ve Ridged Horn Anten Dizisi Tasarımı**  
ÇALIŞKAN A.  
Other, 1

## Supported Projects

- MAHOUTİ P., Kıyık S., ÇALIŞKAN A., GÜNEŞ F., BELEN M. A., Project Supported by Higher Education Institutions, Yapay zeka algoritmaları ile mikrodalga frekans seçici yüzeylerin tasarım optimizasyonu, 2024 - Continues
- Türker Tokan N., Kızılay A., Türk A. S., Erkmen B., Mahouti P., Çalışkan A., Project Supported by Other Official Institutions, Yapay-Zeka Tabanlı Göçük Altı Arama-Kurtarma Danışmanlık Hizmeti, 2023 - 2024
- Türker Tokan N., Kızılay A., Çalışkan A., Erkmen B., Türk A. S., Mahouti P., Yüzer N., TUBİTAK Project, Deprem Sonrası Göçük Altı Canlı Tespiti İçin Yapay Zeka Tabanlı Frekans-Adımlı Multistatik Geniş Bantlı Radar Yaklaşımı, 2022 - 2024
- TOKAN F., YAMAÇ Y. E., ÇALIŞKAN A., Project Supported by Higher Education Institutions, Yakın Mesafe Otomotiv Radarı için Lens Anten Dizisi Tasarımı, 2021 - 2024
- Kızılay A., Türk A. S., Mahouti P., Güneş F., Çalışkan A., Yılmaz A. R., TÜBİTAK International Bilateral Joint Cooperation Program Project, Study and Development of Target Imaging and Recognition Technologies for Contact and Forward-looking GPR Systems, 2020 - 2024
- MAHOUTİ P., GÜNEŞ F., BELEN M. A., EVRANOS İ. Ö., ÇALIŞKAN A., Project Supported by Higher Education Institutions, 3B Boyutlu Yazıcı Teknolojisi ile Yenilikçi Mikrodalga Deverelernin Tasarımı ve Gerçekleştirilmesi, 2018 - 2019
- Kızılay A., Türk A. S., Sedef H., TÜBİTAK International Bilateral Joint Cooperation Program Project, Millimeter Wave Short Range Active and Passive Sensors for Intelligent Alarm Systems, 2015 - 2017
- Türk A. S., Çalışkan A., FP7 Project, Active and Passive Microwave and Millimeter Wave Systems for Security and Subsurface Imaging (AMISS), 2011 - 2014
- Türk A. S., TUBİTAK Project, Araca Monteli İleri Bakan Yere Nüfuz Eden Radar YNR için Çok Geniş Bantlı Anten Sistemleri Tasarımı ve Uygulaması, 2011 - 2013

## **Peer Reviews in Scientific Publications**

INTERNATIONAL JOURNAL OF COMMUNICATION SYSTEMS, SCI Journal, September 2024  
IEEE ACCESS, SCI Journal, September 2024  
IEEE ACCESS, SCI Journal, July 2024  
IEEE ACCESS, National Scientific Refreed Journal, June 2024  
IEEE ACCESS, National Scientific Refreed Journal, May 2024  
IEEE ACCESS, Journal Indexed in SCI-E, March 2024  
MICROWAVE AND OPTICAL TECHNOLOGY LETTERS, SCI Journal, March 2023  
IEEE ACCESS, SCI Journal, March 2023  
IEEE ACCESS, SCI Journal, April 2022  
IEEE ACCESS, SCI Journal, January 2021  
INTERNATIONAL JOURNAL OF RF AND MICROWAVE COMPUTER-AIDED ENGINEERING, SCI Journal, September 2019  
ELECTRONICS LETTERS, SCI Journal, August 2019  
IEEE ANTENNAS AND WIRELESS PROPAGATION LETTERS, SCI Journal, December 2018

## **Metrics**

Publication: 39  
Citation (WoS): 99  
Citation (Scopus): 144  
H-Index (WoS): 5  
H-Index (Scopus): 7

## **Congress and Symposium Activities**

2020 IEEE Ukrainian Microwave Week, Attendee, Kharkiv, Ukraine, 2020  
Signal Processing Symposium, Attendee, Krakow, Poland, 2019

## **Scholarships**

2211A Genel Doktora Bursu, TUBITAK, 2015 - 2019