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International Researcher IDs

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Publons / Web Of Science ResearcherID: ABC-8066-2020

ScopusID: 57202857584

Yoksis Researcher ID: 278937

Education Information

Undergraduate, Anadolu University, Open Education Faculty, Department Of Sociology, Turkey 2017 - 2021

Doctorate, Istanbul Technical University, Bilişim Enstitüsü, Turkey 2017 - 2021

Undergraduate, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Physics, Turkey 2014 - 2018

Undergraduate, Middle East Technical University, Faculty Of Engineering, Elektrik Elektronik Mühendisliği, Turkey 2012 - 2017

Research Areas

Electrical and Electronics Engineering, Electromagnetic, Electric and Magnetic Fields, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Istanbul Technical University, Elektrik-Elektronik, Elektrik Mühendisliği, 2021 - Continues

Research Assistant, Istanbul Technical University, Bilişim Enstitüsü, Bilişim Uygulamaları, 2018 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **A fundamental approach: E-polarized electromagnetic wave diffraction by two dimensional arbitrary-shaped objects with impedance boundary condition**
Tabatadze V., Karaçuha K., Zaridze R., Velhyev E., Karaçuha E.
Journal of Electrical Engineering, vol.73, no.6, pp.426-431, 2022 (SCI-Expanded)
- II. **H-polarized plane wave diffraction by a slotted cylinder with different surface impedances: Solution by the analytical-Numerical approach**
Tabatadze V., Karaçuha K., Alperen Ö. F., Veliev E.
IET MICROWAVES ANTENNAS & PROPAGATION, vol.16, no.14, pp.869-879, 2022 (SCI-Expanded)
- III. **A new approach in electromagnetic plane wave diffraction by two concentric slotted cylinders with variably placed slits: E and H polarized cases**
Karaçuha K., Tabatadze V., Alperen O. F., Veliev E.

IET MICROWAVES ANTENNAS & PROPAGATION, vol.16, no.7, pp.437-450, 2022 (SCI-Expanded)

- IV. **Electromagnetic plane wave diffraction by a cylindrical arc with edges: H-polarized case**
Karaçuha K., Tabatadze V., Veliyev E.
INTERNATIONAL JOURNAL OF APPLIED ELECTROMAGNETICS AND MECHANICS, vol.68, no.1, pp.13-27, 2022 (SCI-Expanded)
- V. **General approach to the line source electromagnetic scattering by a circular strip: Both E- and H-polarisation cases**
Karaçuha K.
IET Microwaves, Antennas and Propagation, vol.15, pp.1721-1734, 2021 (SCI-Expanded)
- VI. **Several case studies on electric field distributions for two human bodies inside the car at 3.5 GHz-5G frequency band**
Akdogan H., Tabatadze V., Karaçuha K., Yaldiz E.
INTERNATIONAL JOURNAL OF APPLIED ELECTROMAGNETICS AND MECHANICS, vol.67, no.4, pp.507-520, 2021 (SCI-Expanded)
- VII. **Line source diffraction by double strips with different fractional boundary conditions**
Karaçuha K., Tabatadze V., Veliyev E.
INTERNATIONAL JOURNAL OF APPLIED ELECTROMAGNETICS AND MECHANICS, vol.67, no.2, pp.165-181, 2021 (SCI-Expanded)
- VIII. **Analyzing Response Efficiency to COVID-19 and Underlying Factors of the Outbreak With Deep Assessment Methodology and Fractional Calculus**
Karaçuha E., Ergün E., Önal Tuğrul N. Ö., Karaçuha K., Tabatadze V.
IEEE ACCESS, vol.9, pp.157812-157824, 2021 (SCI-Expanded)
- IX. **The solution of the plane wave diffraction problem by two strips with different fractional boundary conditions**
Tabatadze V., Karaçuha K., Veliyev E.
JOURNAL OF ELECTROMAGNETIC WAVES AND APPLICATIONS, vol.34, no.7, pp.881-893, 2020 (SCI-Expanded)
- X. **The Electric Field Calculation for Mobile Communication Coverage in Buildings and Indoor Areas by Using the Method of Auxiliary Sources**
Tabatadze V., Karaçuha K., Veliyev E., Karaçuha K., Zaridze R.
COMPLEXITY, vol.2020, 2020 (SCI-Expanded)
- XI. **Plane wave diffraction by strip with an integral boundary condition**
Karaçuha K., Tabatadze V., Veliyev E. I.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.28, no.3, pp.1776-1790, 2020 (SCI-Expanded)
- XII. **Modeling and Prediction of the Covid-19 Cases With Deep Assessment Methodology and Fractional Calculus**
Karaçuha E., Onal N. Ö., Ergün E., Tabatadze V., Alkas H., Karaçuha K., Tontuş H. Ö., Nu N. V. N.
IEEE ACCESS, vol.8, pp.164012-164034, 2020 (SCI-Expanded)
- XIII. **A Mathematical Approach with Fractional Calculus for the Modelling of Children's Physical Development**
Önal N. Ö., Karaçuha K., Erdinç G. H., Karacuha B. B., Karaçuha E.
COMPUTATIONAL AND MATHEMATICAL METHODS IN MEDICINE, vol.2019, 2019 (SCI-Expanded)

Articles Published in Other Journals

- I. **Electromagnetic Diffraction by a Slotted Cylinder with the Fractional Boundary Condition**
Karaçuha K., Tabatadze V., Alperen Ö. F., Karaçuha E., Veliyev E.
Progress In Electromagnetics Research C, vol.128, pp.61-71, 2023 (Scopus)
- II. **Mathematical Modeling of European Countries' Telecommunication Investments Avrupa Ülkelerinin Haberleşme Sektöründeki Yatırımlarının Matematiksel Modellenmesi**

Karaçuha K., Sağlamol S. A., Ergün E., Önal Tuğrul N. Ö., Şimşek K., Karaçuha E.

El-Cezeri Journal of Science and Engineering, vol.9, no.3, pp.1028-1037, 2022 (Scopus)

- III. **MODELING OF MOBILE AND FIXED BROADBAND SUBSCRIPTIONS OF COUNTRIES WITH FRACTIONAL CALCULUS**
Önal Tuğrul N. Ö., Baser C., Ergün E., Karaçuha K., Tabatadze V., Eker S., Karaçuha E., Simsek K.
TRANSPORT AND TELECOMMUNICATION JOURNAL, vol.23, no.1, pp.1-10, 2022 (ESCI)
- IV. **A Simple Approach to Characterize a Buried Object under the Ground**
Tabatadze V., Karaçuha K., Alperen Ö. F., Joof S., Zaridze R.
PROGRESS IN ELECTROMAGNETICS RESEARCH M, vol.109, pp.89-100, 2022 (ESCI)
- V. **Electromagnetic Scattering from 2-D Conducting Objects of Arbitrary Smooth Shape: Complete Mathematical Formulation of the Method of Auxiliary Sources for E-Polarized Case**
Tabatadze V., Karaçuha K., Zaridze R.
Progress In Electromagnetics Research M, vol.114, pp.117-125, 2022 (ESCI)
- VI. **Diffraction of the electromagnetic plane waves by double half-plane with fractional boundary conditions**
Tabatadze V., Karaçuha K., Veliyev E., Karaçuha E.
Progress In Electromagnetics Research M, vol.101, pp.207-218, 2021 (ESCI)
- VII. **The Diffraction by the Half-Plane with the Fractional Boundary Condition**
Veliyev E., Tabatadze V., Karaçuha K., Karaçuha E.
PROGRESS IN ELECTROMAGNETICS RESEARCH M, vol.88, pp.101-110, 2020 (ESCI)
- VIII. **Body Shape and Complex Permittivity Determination Using the Method of Auxiliary Sources**
Tabatadze V., Karaçuha K., Karaçuha E.
PROGRESS IN ELECTROMAGNETICS RESEARCH M, vol.87, pp.115-125, 2019 (ESCI)
- IX. **The fractional derivative approach for diffraction problems: Plane wave diffraction by two strips with fractional boundary conditions**
Tabatadze V., Karaçuha K., Veliyev E.
Progress In Electromagnetics Research C, vol.95, pp.251-264, 2019 (Scopus)
- X. **Analysis of Current Distributions and Radar Cross Sections of Line Source Scattering from Impedance Strip by Fractional Derivative Method**
Karaçuha K., Veliyev E., Tabatadze V., Karaçuha E.
ADVANCED ELECTROMAGNETICS, vol.8, no.2, pp.108-113, 2019 (ESCI)
- XI. **The Use of the Fractional Derivatives Approach to Solve the Problem of Diffraction of a Cylindrical Wave on an Impedance Strip**
Veliyev E., Karaçuha K., Karaçuha E., Dur O.
PROGRESS IN ELECTROMAGNETICS RESEARCH LETTERS, vol.77, pp.19-25, 2018 (ESCI)

Refereed Congress / Symposium Publications in Proceedings

- I. **A Filtering Dipole Antenna Design with Bandwidth Enhancement for 5G**
Çelik F. T., Joof S., Karaçuha K.
17th European Conference on Antennas and Propagation, EuCAP 2023, Florence, Italy, 26 - 31 March 2023
- II. **A Wideband Dipole Antenna Design for Through-the-Wall Imaging on Security Applications**
Joof S., Doğu S., Çelik F. T., Karaçuha K.
17th European Conference on Antennas and Propagation, EuCAP 2023, Florence, Italy, 26 - 31 March 2023
- III. **Modelling on economic growth and telecommunication sector of Turkey using a fractional approach including error minimizing**
Önal N. Ö., Karaçuha K., Karaçuha E.
2021 Asia-Pacific Conference on Applied Mathematics and Statistics, AMS 2021, Chiangmai, Virtual, Thailand, 20 - 22 February 2021, vol.2471
- IV. **A Dual-Band Quasi-Yagi Reconfigurable Binomial Weighted Phased Antenna Array Design**

Karaçuha K., Celik F. T.

2nd IEEE Ukrainian Microwave Week, UkrMW 2022, Kharkiv, Ukraine, 14 - 18 November 2022, pp.351-354

V. Electromagnetic Scattering by the Strip with Different Impedances on Both Sides

Tabatadze V., Karaçuha K., Karaçuha E., Veliev E.

2nd IEEE Ukrainian Microwave Week, UkrMW 2022, Kharkiv, Ukraine, 14 - 18 November 2022, pp.482-485

VI. A Gain Enhancement Study on a Vivaldi Antenna for Radar Applications

Yildiz E. M., Dede C. F. G., Karaçuha K., Eker S.

2022 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, AP-S/URSI 2022, Colorado, United States Of America, 10 - 15 July 2022, pp.1218-1219

VII. Four Beam Patch Antenna

Barbakadze V., Karaçuha K., Tabatadze V., Zaridze R.

2nd IEEE Ukrainian Microwave Week, UkrMW 2022, Kharkiv, Ukraine, 14 - 18 November 2022, pp.600-603

VIII. Electromagnetic Diffraction by a Pulse from 2-D Dielectric Objects

Tabatadze V., Karaçuha K., Zaridze R.

2nd IEEE Ukrainian Microwave Week, UkrMW 2022, Kharkiv, Ukraine, 14 - 18 November 2022, pp.559-562

IX. A Simple Approach to Determine the Buried Object under the Ground

KARAÇUHA K., TABATADZE V., KARAÇUHA E., Zaridze R.

2021 IEEE 26th International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), Georgia, 8 - 10 September 2021

X. A Reconfigurable Binomial Weighted Phased Array Antenna Design for Wi-Fi Band Wi-Fi Bandi için Yeniden Yapılandırılabilir Binom Ağırlıklı Fazlı Dizi Anten Tasarımı

ÇELİK F. T., Karaçuha K.

28th Signal Processing and Communications Applications Conference, SIU 2020, Gaziantep, Turkey, 5 - 07 October 2020

XI. The Diffraction by the Half-plane with the Fractional Boundary Condition

Tabatadze V., Veliyev E., Karaçuha E., Karaçuha K.

2020 International Applied Computational Electromagnetics Society Symposium, ACES-Monterey 2020, California, United States Of America, 27 - 31 July 2020

XII. A Two-Element Array Design of Dual-Band Quasi-Yagi Antenna with Reflector

Gul F. C., Karaçuha K., Eker S.

IEEE International Symposium on Antennas and Propagation / North American Radio Science Meeting, ELECTR NETWORK, 5 - 10 July 2020, pp.1915-1916

XIII. A Reconfigurable Binomial Weighted Phased. Array Antenna Design for Wi-Fi Band

ÇELİK F. T., Karaçuha K.

28th Signal Processing and Communications Applications Conference (SIU), ELECTR NETWORK, 5 - 07 October 2020

XIV. Broadband RF communication system design for smart houses including Wi-Fi and 5G

ÇELİK F. T., Karaçuha K.

2019 Photonics and Electromagnetics Research Symposium - Fall, PIERS - Fall 2019, Xiamen, China, 17 - 20 December 2019, pp.1558-1562

XV. Dual band quasi-yagi antenna array structure for the side loop reduction by using binomial weighting

Karaçuha K., ÇELİK F. T.

2019 Photonics and Electromagnetics Research Symposium - Fall, PIERS - Fall 2019, Xiamen, China, 17 - 20 December 2019, pp.1567-1570

XVI. Dual-band Quasi-Yagi Antenna Gain Enhancement by Using a Reflector Plate

Gul F. C., Karaçuha K., Eker S.

Photonics and Electromagnetics Research Symposium - Spring (PIERS-Spring), Rome, Italy, 17 - 20 June 2019, pp.3594-3600

XVII. Application of The Method of Fractional Derivatives to the Solution of the Problem of Plane Wave Diffraction by Two Axisymmetric Strips of Different Sizes

Karaçuha K., Velyev E., Tabatadze V., Karaçuha E.

URSI International Symposium on Electromagnetic Theory (EMTS), California, United States Of America, 27 - 31 May 2019

XVIII. Miniaturized Virtual Array Dual Band Loop Quasi - Yagi Antenna Design for 5G Application

ÇELİK F. T., Karaçuha K.

URSI International Symposium on Electromagnetic Theory (EMTS), California, United States Of America, 27 - 31 May 2019

XIX. Scattering of a Cylindrical Wave from an Impedance Strip by Using the Method of Fractional Derivatives

Veliev E., Karaçuha K., Karaçuha E.

23rd International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), Tbilisi, Georgia, 24 - 27 September 2018, pp.72-75

XX. Dual - Band Microtrip Quasi - Yagi Antenna Design for Free Band and 5G Mobile Communication

Celik F. T., Karacuha K.

23rd International Seminar/Workshop on Direct and Inverse Problems of Electromagnetic and Acoustic Wave Theory (DIPED), Tbilisi, Georgia, 24 - 27 September 2018, pp.189-192

Supported Projects

Karaçuha E., Karaçuha K., Ergün E., Tabatadze V., Önal Tuğrul N. Ö., Project Supported by Higher Education Institutions, Derin Değerlendirme ve Yapay Zeka ile G8 Ülkeleri ve Türkiye'nin Ekonomik Faktörlerinin Modellenmesi, Etki Analizi ve Öngörülmesi, 2021 - 2024

Karaçuha K., ALTUNSU B., TÜRK B., KARATAŞ E., Önal Tuğrul N. Ö., Project Supported by Higher Education Institutions, Atış Kararını Kendi Veren Otonom Kara Aracı, 2022 - 2023

Karaçuha K., Project Supported by Higher Education Institutions, 5G için Geniş Bandlı Filtreleme Özelliğine Sahip Anten Tasarımı Denemesi, 2022 - 2023

Karaçuha E., Akıncı M. N., Karaçuha K., Yelten M. B., Temeltaş H., Acar M. H., GÖSE E., ŞAHİNTÜRK H., Şeker Ş. S., Yılmaz Abdolsaheb T., TUBITAK Project, SAVA120, 2020 - 2022

Metrics

Publication: 56

Citation (WoS): 19

Citation (Scopus): 138

H-Index (WoS): 3

H-Index (Scopus): 8