

Assoc. Prof.
Biol
ASLANYÜREK



Personal Information

Office Phone: [+90 212 383 4594](tel:+902123834594)

Other Email:

birolaslanyurek@yahoo.com

Web:

<https://avesis.yildiz.edu.tr/baslan>

Address: Yıldız Teknik Üniversitesi,
Davutpaşa Kampüsü Kimya-
Metalurji Fakültesi, Matematik
Mühendisliği Bölümü, A-222
Esenler/İSTANBUL



International Researcher IDs

ScholarID: 32jiaP4AAAAJ

ORCID: 0000-0002-0792-667X

Publons / Web Of Science

ResearcherID: AAD-5096-2020

ScopusID: 42461057500

Yoksis Researcher ID: 202174

Education Information

Doctorate, Yıldız Technical
University, Faculty Of Chemical And
Metallurgical Engineering, Matematik
Mühendisliği, Turkey 2007 - 2013
Postgraduate, Yıldız Technical
University, Faculty Of Chemical And
Metallurgical Engineering, Matematik
Mühendisliği, Turkey 2005 - 2007
Undergraduate, Yıldız Technical
University, Faculty Of Chemical And
Metallurgical Engineering, Matematik
Mühendisliği, Turkey 2000 - 2005

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, DİELEKTRİK KAPLAMALAR İÇİN GENEL EMPEDANS SINIR KOŞULLARI VE TAHRİBATSIZ MUAYENEDE UYGULANMASI, Yıldız Teknik Üniversitesi, FACULTY OF CHEMICAL AND METALLURGICAL ENGINEERING, Matematik Mühendisliği, 2013

Postgraduate, ELEKTROMAGNETİK DALGALARIN İLETKEN BİR CİSİM ÜZERİNDEKİ DEĞİŞKEN KALINLIKLI TABAKADAN

SAÇILMASI, Yıldız Teknik Üniversitesi, FACULTY OF CHEMICAL AND METALLURGICAL ENGINEERING, Matematik Mühendisliği, 2007

Research Areas

Computer Sciences, Artificial Intelligence, Computer Learning and Pattern Recognition, Electrical and Electronics Engineering, Electromagnetic, Wave Propagation and Remote Sensing, Mathematics, Numerical Analysis, Natural Sciences, Engineering and Technology

Academic and Administrative Experience

Deputy Head of Department, Yildiz Technical University, 2017 - 2024

Deputy Head of Department, Yildiz Technical University, FACULTY OF CHEMICAL AND METALLURGICAL ENGINEERING, Department of Mathematics Engineering, 2014 - 2016

Courses

Postgraduate

İleri Bilimsel Programlama, Postgraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018

Mikrodalga Tomografisinde Simülasyon Teknikleri, Postgraduate, 2016 - 2017, 2014 - 2015

Dönem Projesi, Postgraduate, 2015 - 2016

Undergraduate

Introduction to Artificial Intelligence, Undergraduate, 2022 - 2023

Programming Languages 2, Undergraduate, 2019 - 2020

Matematik Mühendisliğinde Tasarım Uygulamaları, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2015 - 2016, 2014 - 2015

Bitirme Çalışması, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016

Statistics, Undergraduate, 2020 - 2021, 2019 - 2020

Probability Theory, Undergraduate, 2018 - 2019

Programlama Dilleri 1, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018

Olasılık Ve İstatistik, Undergraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015

Matematik Mühendisliğinde Tasarım Uygulamaları, Undergraduate, 2017 - 2018

Yapay Zeka, Undergraduate, 2015 - 2016

Mühendislik İstatistiği, Undergraduate, 2015 - 2016

Bitirme Çalışması, Undergraduate, 2014 - 2015

Diferansiyel Denklemler, Undergraduate, 2015 - 2016

Matematik Mühendisliğine Giriş, Undergraduate, 2015 - 2016, 2014 - 2015

Analitik Geometri, Undergraduate, 2014 - 2015

Sayısal Analiz, Undergraduate, 2014 - 2015

Mühendislik İstatistiği, Undergraduate, 2014 - 2015

Lineer Cebir, Undergraduate, 2014 - 2015

Supervised Theses

Aslanyürek B., DEEP LEARNING-BASED MULTI-STRUCTURAL SEGMENTATION OF FETAL MR IMAGES, Postgraduate, E.Demir(Student), Continues

Şahintürk H., Aslanyürek B., MEME KANSERİ İÇİN MRI GÖRÜNTÜLERİNDEN YAPAY ZEKA TABANLI DOKU SEGMENTASYONU, Postgraduate, B.Keleş(Student), Continues

Aslanyürek B., Aydın E., Prediction and Classification of Childhood Diseases with Artificial Intelligence Methods, Doctorate, K.Kemal(Student), Continues

Aslanyürek B., Aydın E., Feature Extraction From Patient Data For Diagnosing Pediatric Patients, Postgraduate, G.Altunsaçan(Student), 2024

Aslanyürek B., Sales Forecasting in Apparel Retail Industry with Machine Learning, Postgraduate, S.Ceylan(Student), 2024

Aslanyürek B., Detection and Localization of Microwave Breast Cancer by Machine Learning Techniques, Postgraduate, E.Tölük(Student), 2022

Aslanyürek B., Aydın E., Detection of Inflammatory Process in Hypospadias Cases with Data Mining Methods, Postgraduate, H.ACAR(Student), 2022

Aslanyürek B., Aydın E., Yeni Doğanların Yoğun Bakım İhtiyacının Makine Öğrenmesi Teknikleri ile Doğum Öncesinde Tahmin Edilmesi, Postgraduate, S.GESOĞLU(Student), 2022

Aslanyürek B., Veri Madenciliği Kullanılarak Mikrodalga Verileri ile Beyindeki Kitleli Lezyonların Teşhisi, Postgraduate, T.Vural(Student), 2017

Designed Lessons

Postgraduate

Aslanyürek B., Advanced Scientific Programming, Postgraduate, 2017 - 2018

Undergraduate

Aslanyürek B., Introduction to Artificial Intelligence, Undergraduate, 2018 - 2019

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Pulmonary vasculature development in congenital diaphragmatic hernia: a novel automated quantitative imaging analysis**
Aydın E., Durmuş F., Torlak N., Oria M., GÜLER BAYAZIT N., Öztürk Işık E., ASLANYÜREK B., Peiro J. L.
Pediatric Surgery International, vol.40, no.1, 2024 (SCI-Expanded)
- II. **A simple machine learning approach for preoperative diagnosis of esophageal burns after caustic substance ingestion in children.**
Aydın E., Khanmammadova N., Aslanyürek B., Urgancı N., Usta M., Parlak A., Kaya Ş., Gurbuz T. U., Sarıkaya M., et al.
Pediatric surgery international, vol.40, no.1, pp.20, 2023 (SCI-Expanded)
- III. **A Semianalytical Method for Electromagnetic Scattering by Infinitely Long Arbitrary Shaped Multilayer Cylinders at Oblique Incidence**
Gurbuz T. U., Aslanyurek B.
IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, vol.71, no.4, pp.3581-3589, 2023 (SCI-Expanded)
- IV. **An Efficient Recursive Approach for Electromagnetic Scattering by Arbitrary-Shaped Multilayer Cylinders**
Gurbuz T. U., ASLANYÜREK B.
IEEE ANTENNAS AND WIRELESS PROPAGATION LETTERS, vol.19, no.8, pp.1375-1379, 2020 (SCI-Expanded)
- V. **TM Scattering by Arbitrary-Shaped Multilayer Cylinders Having Embedded Inhomogeneities**
ASLANYÜREK B.
IEEE ANTENNAS AND WIRELESS PROPAGATION LETTERS, vol.19, no.4, pp.576-580, 2020 (SCI-Expanded)
- VI. **A Series Solution for TE Electromagnetic Scattering by Arbitrary-Shaped Multilayer Cylinders**
ASLANYÜREK B., Gurbuz T. U.
IEEE ANTENNAS AND WIRELESS PROPAGATION LETTERS, vol.17, no.1, pp.38-41, 2018 (SCI-Expanded)
- VII. **A Continuity-Based Series Solution for Electromagnetic Scattering by Arbitrary Shaped Multilayer Cylinders: TM Case**
ASLANYÜREK B., Gurbuz T. U.
IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, vol.65, no.2, pp.812-819, 2017 (SCI-Expanded)
- VIII. **A Two-Stage Procedure for Microwave Imaging of a Buried Dielectric along with the Randomly Rough Surface above It**
Gurbuz T. U., ASLANYÜREK B.
INTERNATIONAL JOURNAL OF ANTENNAS AND PROPAGATION, 2015 (SCI-Expanded)
- IX. **Microwave Imaging of a Slightly Varying 2-D Conducting Object Through Generalized Impedance Boundary**

Conditions

ASLANYÜREK B., ŞAHİNTÜRK H., Çayören M.

IEEE GEOSCIENCE AND REMOTE SENSING LETTERS, vol.11, no.11, pp.1851-1855, 2014 (SCI-Expanded)

X. **RECONSTRUCTION OF THICKNESS VARIATION OF A DIELECTRIC COATING THROUGH THE GENERALIZED IMPEDANCE BOUNDARY CONDITIONS**

Aslanyürek B., Şahintürk H.

ESAIM-MATHEMATICAL MODELLING AND NUMERICAL ANALYSIS-MODELISATION MATHEMATIQUE ET ANALYSE NUMERIQUE, vol.48, no.4, pp.1011-1027, 2014 (SCI-Expanded)

XI. **A Nonlinear Microwave Breast Cancer Imaging Approach Through Realistic Body-Breast Modeling**

Gurbuz T. U., ASLANYÜREK B., Yapar A., ŞAHİNTÜRK H., Akduman İ.

IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, vol.62, no.5, pp.2596-2605, 2014 (SCI-Expanded)

XII. **An Efficient Nonlinear Imaging Approach for Dielectric Objects Buried Under a Rough Surface**

Gurbuz T. U., ASLANYÜREK B., Karabulut E. P., Akduman İ.

IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING, vol.52, no.5, pp.3013-3022, 2014 (SCI-Expanded)

XIII. **Generalized impedance boundary conditions for thin dielectric coatings with variable thickness**

Aslanyürek B., Haddar H., Şahintürk H.

WAVE MOTION, vol.48, no.7, pp.681-700, 2011 (SCI-Expanded)

Articles Published in Other Journals

I. **A Meshless Method for TM Scattering from Arbitrary Shaped Radially Inhomogeneous Cylinders**

Aslanyürek B., Gürbüz T. U.

Progress In Electromagnetics Research M, vol.99, pp.35-44, 2021 (ESCI)

Books

I. **Analysis of Lung Structure in Congenital Diaphragm Hernia Using Mathematical Modeling**

Aydın E., Aslanyürek B.

in: Artificial Intelligence in Health and its Applications, Can ÖZLÜ, Mehmet Ali GEDİK, Nilüfer KÖYLÜOĞLU, Hilmi Sefa YANGAL, Aysun ÖZLÜ, Editor, Akademisyen Yayınevi, Ankara, pp.379-388, 2021

Papers Published in Refereed Scientific Meetings

I. **Deep Learning Based Multiple Structural Segmentation of Fetal MRI Images**

Demir E., Aslanyürek B., Aydın E.

17th International Hippocrates Congress on Medical and Health Sciences, Gaziantep, Turkey, 14 - 15 March 2025, pp.213

II. **FEATURE EXTRACTION FROM PATIENT DATA FOR DIAGNOSING PEDIATRIC PATIENTS**

Altunsaçan G., Aslanyürek B., Aydın E.

International Congress of New Searches in Sciences, İstanbul, Turkey, 8 - 09 June 2024, pp.37

III. **Sales Forecasting in Apparel Retail Industry with Machine Learning**

Ceylan S., Aslanyürek B.

Atılım Üniversitesi Mühendislik Bilimleri ve Araştırmaları Öğrenci Kongresi, Ankara, Turkey, 16 - 17 May 2024, pp.21

IV. **A Meshless Procedure for TE Electromagnetic Scattering from Obliquely Illuminated Arbitrary Shaped Multilayer Cylinders**

Gürbüz T. U., Aslanyürek B.

International Marmara Sciences Congress IMASCON 2023 - Autumn, Kocaeli, Turkey, 15 - 16 December 2023, pp.51

V. **A Semi-analytical Method for TE Scattering from Arbitrary Shaped Radially Inhomogeneous Cylindrical Shells at Normal Incidence**

Gürbüz T. U., Aslanyürek B.

2023 Photonics and Electromagnetics Research Symposium, PIERS 2023, Prague, Czech Republic, 3 - 06 July 2023, pp.65-70

- VI. **Data Mining Applications Based On The Laboratory Results Of Kids Who Diagnosed With Hypospadias Or With Chordee Or Had Circumcision Operation**
Acar H., Aslanyürek B., Aydın E.
III. International Science and Innovation Congress , Tokat, Turkey, 9 - 12 June 2022, pp.1
- VII. **Estimation of Inguinal Region Diseases in Children With the Help of Data Based on Blood Values**
Acar H., Aslanyürek B., Aydın E.
2nd International Graduate Studies Congress, Balıkesir, Turkey, 8 - 11 June 2022, pp.890-891
- VIII. **Predicting Intensive Care Needs of Newborns Prenatally by Machine Learning Techniques**
Gesöglü S., Uzun A., Aydın E., Aslanyürek B.
International Aegean Health Areas Symposium 2021, İzmir, Turkey, 18 - 19 December 2021, pp.112-113
- IX. **An Investigation of Machine Learning Algorithms for Microwave Breast Cancer Detection and Localization**
Tölük E., Aslanyürek B.
VI. International Scientific and Vocational Studies Congress – Engineering, Ankara, Turkey, 23 - 26 December 2021, pp.9-10
- X. **Characterization of lung vasculature in the rat fetus with congenital Diaphragmatic Hernia**
Aslanyürek B., Durmuş F., Torlak N., Alonso M. O., Aslanyürek B., Güler Bayazıt N., Öztürk Işık E., Peiro J. L.
64. Türkiye Milli Pediatri Kongresi, Ankara, Turkey, 15 - 20 December 2020, pp.1
- XI. **An Efficient Method for Imaging of Inhomogeneous Objects in Arbitrary Shaped Multilayer Cylindrical Structures**
Gürbüz T. U., Aslanyürek B.
Progress in Electromagnetics Research Symposium (PIERS), Rome, Italy, 17 - 20 June 2019, pp.1
- XII. **A Semi-analytical Solution for TE Electromagnetic Scattering from Arbitrary Shaped Dielectric Cylinders**
ASLANYÜREK B., GURBUZ T. U., HASAR U. C.
Progress In Electromagnetics Research Symposium, Petersburg, Russia, 22 May 2017, pp.1
- XIII. **Veri Madenciliği Kullanılarak Mikrodalga Verileri ile Beyindeki Lezyonların Teşhisi**
Vural T., ASLANYÜREK B., ŞAHİNTÜRK H.
IV. Kadın Matematikçiler Derneği Çalıştayı, Turkey, 28 - 29 April 2017
- XIV. **Shape Reconstruction of a Dielectric Coated PEC through Generalized Impedance Boundary Conditions**
ASLANYÜREK B., GÜRBÜZ T. U., ŞAHİNTÜRK H.
Progress in Electromagnetics Research Symposium in Stockholm, 12 - 15 August 2013
- XV. **Efficient Imaging of 3D Objects Located in a Layered Media with Rough Interfaces**
GÜRBÜZ T. U., ASLANYÜREK B., AKDUMAN İ.
Progress in Electromagnetics Research Symposium in Stocholm, 12 - 15 August 2013
- XVI. **A Contrast Source Imaging Approach for Microwave Breast Cancer Detection**
ASLANYÜREK B., Akduman İ., Yapar A., Şahintürk H.
13th International Symposium on Microwave and Optical Technology in Praque, 01 June 2011
- XVII. **A Novel Two Step Procedure for Microwave Breast Cancer Imaging**
AKDUMAN İ., GÜRBÜZ T. U., ASLANYÜREK B., GÜREN O., YAPAR A., ERGENE L., ŞAHİNTÜRK H.
6th International Workshop on Biological Effects of Electromagnetic Fields in Bodrum, 10 - 14 October 2010
- XVIII. **A Hybrid Method for the Scattering of Electromagnetic Waves from Coatings of Variable Thickness**
ASLANYÜREK B., ÇAYÖREN M., ŞAHİNTÜRK H.
PIERS 2007 in Prague Proceedings, 27 - 29 August 2007, pp.96
- XIX. **Surface Impedance Modelling of Perfectly Conducting Rough Surface**
Özdemir Ö., Altuncu Y., Şahintürk H., Aslanyürek B.
Progress in Electromagnetics Research Symposium (PIERS), Beijing, China, 26 - 30 March 2007, pp.1
- XX. **A New Approach for the Scattering of Electromagnetic Waves from Dielectric Bodies of Arbitrary Shape**
ÇAYÖREN M., ASLANYÜREK B.
PIERS 2007 in Beijing Proceedings, 26 - 30 March 2007, pp.31

Supported Projects

Aslanyürek B., Polat K. K., Özer H. Ü., Aydın E., TUBITAK Project, Çocuk Cerrahisi Hastalarında Elektronik Sağlık Kayıt Verilerinden Türkçe Erken Tanı ve Klinik Destek Sistemi Elde Edilmesi, 2025 - 2026

ASLANYÜREK B., AYDIN E., ALTUNSAÇAN G., Project Supported by Higher Education Institutions, Çocuk Hastaların Tanısının Belirlenmesinde Hasta Verilerindeki Özniteliklerin Çıkarılması, 2023 - 2024

ASLANYÜREK B., Ceylan S., Project Supported by Higher Education Institutions, Makine Öğrenmesi ile Hazır Giyim Perakende Sektöründe Satış Tahmini, 2023 - 2024

Aydın E., Aslanyürek B., Oto Ç., TUBITAK Project, Determination of the Relationship between Pulmonary Hypertension and RDW , 2021 - 2023

Sunay A. E., Şahintürk H., Aslanyürek B., Development Agency, Kovanımı İzliyorum, 2013 - 2014

Peer Reviews in Scientific Publications

IEEE ANTENNAS AND WIRELESS PROPAGATION LETTERS, SCI Journal, June 2023

PROGRESS IN ELECTROMAGNETICS RESEARCH M, Journal Indexed in ESCI, May 2022

TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, Journal Indexed in SCI-E, July 2021

Metrics

Publication: 35

Citation (WoS): 99

Citation (Scopus): 133

H-Index (WoS): 5

H-Index (Scopus): 6

Congress and Symposium Activities

International Conference on Applied Analysis and Mathematical Modeling, Session Moderator, İstanbul, Turkey, 2013

Scholarships

2212-Yurtiçi-Yurtdışı Bütünleştirilmiş Doktora Burs Programı (BDP) - (Proje no: 1959B010500014), TUBITAK, 2007 - 2011