

İHSAN YILMAZ

PROF.

Email : iyilmaz@comu.edu.tr

International Researcher IDs

ORCID: 0000-0001-7684-9690

Publons / Web Of Science ResearcherID: AAH-9838-2021

Yoksis Researcher ID: 147732

Learning Knowledge

Doctorate 1993 - 1997	Ege University, Fen Bilimleri Enstitüsü, Turkey
Postgraduate 1991 - 1993	Ege University, Fen Bilimleri Enstitüsü, Turkey
Undergraduate 1987 - 1991	Ege University, Fen Fakültesi, Astronomi Ve Uzay Bilimleri-Matematik, Turkey

Foreign Languages

English, B2 Upper Intermediate

Academic Titles / Tasks

Professor 2013 - Continues	Canakkale Onsekiz Mart University, Mühendislik Fakültesi, Bilgisayar Mühendisliği
Professor 2011 - 2013	Maltepe University, Faculty Of Engineering And Natural Sciences, Department Of Computer Engineering
Professor 2007 - 2011	Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik
Associate Professor 2001 - 2006	Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik
Assistant Professor 1999 - 2001	Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik
Assistant Professor 1998 - 1999	Mugla Sitki Kocman University, Faculty Of Science, Department Of Physics

Research Assistant
1995 - 1998

Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik

Research Assistant
1992 - 1994

Ege University, Faculty Of Science, Astronomi Ve Uzay Bilimleri Bölümü

Supported Projects

1. Yılmaz İ., TUBITAK Project, Kuantum Bilişim Teknolojileri Kullanılarak Kuantum Ağ Simülasyon Yazılımı Geliştirilmesi, 2020 - 2022
2. ŞAHİN E., YILMAZ İ., Project Supported by Higher Education Institutions, Çok dalga boylu kuantum görüntülerde kenar belirleme algoritmalarının geliştirilmesi, 2019 - 2020
3. YILMAZ İ., YAŞAR C., Project Supported by Higher Education Institutions, Kuantum Bilgi İşlem Temelli Elektronik İmza Yazılımı Geliştirilmesi, 2018 - 2020
4. AYGÜN S., AKTAŞ C., YILMAZ İ., BAYSAL H., Project Supported by Higher Education Institutions, Tetrad Teoride Kara Delik ve Solucan Delikleri için Enerji Momentum Dağılımlarının Araştırılması, 2018 - 2018
5. AYGÜN S., AKTAŞ C., YILMAZ İ., Project Supported by Higher Education Institutions, Evrenin ivmelenmesi probleminin $f(R,T)$ gravitasyon teorisinde araştırılması, 2017 - 2017
6. AYGÜN S., AKTAŞ C., YILMAZ İ., ŞAHİN M., Project Supported by Higher Education Institutions, Creation Field teori ve evrenin ivmelenmesi probleminin araştırılması, 2016 - 2016
7. AKTAŞ C., YILMAZ İ., CAMCI Ç., Project Supported by Higher Education Institutions, Kuark Maddenin Çökmesiyle Kara Delik Oluşumu, 2011 - 2016
8. YILMAZ İ., GÜNAY DEMİREL E., Project Supported by Higher Education Institutions, Karanlık Madde ve Karanlık Enerji Çözümleri, 2006 - 2009
9. YILMAZ İ., AKTAŞ C., Project Supported by Higher Education Institutions, Kuark Gluon Maddenin Uzay-Zaman Geometrisi, 2006 - 2008
10. BAYSAL H., YILMAZ İ., Project Supported by Higher Education Institutions, Beş boyutlu sicim kozmolojik modeller, 2005 - 2007
11. YILMAZ İ., BAYSAL H., Project Supported by Higher Education Institutions, Rotasyon yapan gödel evreninde garip quark madde çözümleri, 2005 - 2006
12. TARHAN İ., YILMAZ İ., BAYSAL H., KANMAZ E., GÜÇLÜ K., CAMCI U., Project Supported by Higher Education Institutions, Skaler alan kaynaklı bazı kozmolojik modeller ve evrenin evrimine etkileri, 2002 - 2006
13. YILMAZ İ., BAYSAL H., TARHAN İ., AKTAŞ C., Project Supported by Higher Education Institutions, Rotasyon Yapan ideal Akışkanlı, skaler alanlı ve ısı akıllı kozmolojik Modeller, 2001 - 2006
14. TARHAN İ., YILMAZ İ., ÖZDEMİR M., YAVUZ İ., CAMCI U., KUŞKU N., AYKUT İ., BAYSAL H., Project Supported by Higher Education Institutions, String (Sicim) akışkan kaynaklı bazı kozmolojik modeller ve evrenin evrimine etkileri, 2000 - 2006
15. YILMAZ İ., BAYSAL H., ULU DOĞRU M., AYGÜN S., TUNCEL S., Project Supported by Higher Education Institutions, Karadelik Çözümleri, 2003 - 2005

Awards

1. Yılmaz İ., Çağlar E., 3. Ulusal Üniversiteler Patent Yarışması, Türk Patent, April 2023
2. Şahin E., Yılmaz İ., A METHOD FOR NON-LOCAL IMPLEMENTATION OF MULTI QUBITS CONTROLLED UNITARY QUANTUM GATES, T.C. Sanayi Ve Teknoloji Bakanlığı, Türk Patent Ve Marka Kurumu, Uluslararası Buluşçular Birliği Federasyonu (Ifia), Dünya Fikri Mülkiyet Teşkilatı (Wipo), Avrupa Patent Ofisi (Epo) Ve Türkiye Teknoloji Takımı Vakfı, Isif21, September 2021

3. Yılmaz İ., Ceylan O. S., UGAL INVENT 2021 Buluş Fuarı Gümüş Madalya, Ugal Invent 2021, January 2021

Published journal articles indexed by SCI, SSCI, and AHCI

1. **A quantum algorithm for solving weapon target assignment problem**
Acar E., Hatipoğlu S., YILMAZ İ.
Engineering Applications of Artificial Intelligence, vol.125, 2023 (SCI-Expanded)
2. **The effect of superposition and entanglement on hybrid quantum machine learning for weather forecasting**
Oğur B., Yılmaz İ.
QUANTUM INFORMATION AND COMPUTATION, vol.23, no.3, pp.1-14, 2023 (SCI-Expanded)
3. **High-dimensional Grover multi-target search algorithm on Cirq**
Acar E., GÜNDÜZ S., Akpınar G., YILMAZ İ.
EUROPEAN PHYSICAL JOURNAL PLUS, vol.137, no.2, 2022 (SCI-Expanded)
4. **Improving effectiveness of different deep learning-based models for detecting COVID-19 from computed tomography (CT) images**
Acar E., ŞAHİN E., YILMAZ İ.
NEURAL COMPUTING & APPLICATIONS, vol.33, no.24, pp.17589-17609, 2021 (SCI-Expanded)
5. **Nonlocal implementation of multi-qubit controlled unitary quantum gates with quantum channel**
ŞAHİN E., YILMAZ İ.
MODERN PHYSICS LETTERS A, vol.36, no.34, 2021 (SCI-Expanded)
6. **A quantum edge detection algorithm for quantum multi-wavelength images**
Şahin E., Yılmaz İ.
INTERNATIONAL JOURNAL OF QUANTUM INFORMATION, vol.19, no.3, 2021 (SCI-Expanded)
7. **COVID-19 detection on IBM quantum computer with classical-quantum transfer learning**
Acar E., YILMAZ İ.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.29, no.1, pp.46-61, 2021 (SCI-Expanded)
8. **Some information from thermodynamic curvature of Chaplygin gas**
Turkgenc E., YILMAZ İ.
MODERN PHYSICS LETTERS A, vol.34, no.23, 2019 (SCI-Expanded)
9. **QRMA: quantum representation of multichannel audio**
Şahin E., Yılmaz İ.
QUANTUM INFORMATION PROCESSING, vol.18, 2019 (SCI-Expanded)
10. **A novel quantum steganography algorithm based on LSBq for multi-wavelength quantum images**
Şahin E., Yılmaz İ.
QUANTUM INFORMATION PROCESSING, vol.17, 2018 (SCI-Expanded)
11. **Teleparallel energy-momentum distribution of various black hole and wormhole metrics**
Aygun S., Baysal H., Aktas C., Yilmaz I., Sahoo P. K., Tarhan I.
INTERNATIONAL JOURNAL OF MODERN PHYSICS A, vol.33, no.30, 2018 (SCI-Expanded)
12. **QRMW: quantum representation of multi wavelength images**
Şahin E., Yılmaz İ.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.26, pp.768-779, 2018 (SCI-Expanded)
13. **Strange quark matter solutions for Marder's universe in $f(R, T)$ gravity with Lambda**
Aygun S., Aktas C., Yilmaz I.
ASTROPHYSICS AND SPACE SCIENCE, vol.361, no.12, 2016 (SCI-Expanded)
14. **Higher dimensional FRW universe solutions with quark and strange quark matter in creation field cosmology**
AYGÜN S., AKTAŞ C., YILMAZ İ., Sahin M.

- CHINESE JOURNAL OF PHYSICS, vol.54, no.5, pp.810-819, 2016 (SCI-Expanded)
15. **Expanding and nonexpanding conformal wormholes in scalar-tensor theory**
ULU DOĞRU M., YILMAZ İ.
INTERNATIONAL JOURNAL OF MODERN PHYSICS D, vol.24, no.8, 2015 (SCI-Expanded)
 16. **Quark and strange quark matter in $f(R)$ gravity for Bianchi type I and V space-times**
Yilmaz I., BAYSAL H., AKTAŞ C.
GENERAL RELATIVITY AND GRAVITATION, vol.44, no.9, pp.2313-2328, 2012 (SCI-Expanded)
 17. **Is the universe homogeneous and isotropic in the time when quark-gluon plasma exists?**
AKTAŞ C., YILMAZ İ.
GENERAL RELATIVITY AND GRAVITATION, vol.43, no.6, pp.1577-1591, 2011 (SCI-Expanded)
 18. **Energy-momentum problem in general relativity and tele-parallel gravity for string and domain wall**
Aygün M., YILMAZ İ.
Acta Physica Polonica B, vol.38, no.8, pp.2497-2511, 2007 (SCI-Expanded)
 19. **Some exact solutions of string cosmology with heat flux in bianchi type III space-time**
Yavuz I., Yilmaz I.
ASTROPHYSICS AND SPACE SCIENCE, vol.245, no.1, pp.131-138, 1996 (SCI-Expanded)

Articles Published in Other Journals

1. **High Dimensional Quantum Digital Signature Depending on Entanglement Swapping**
Aktas A., Yilmaz I.
INTERNATIONAL JOURNAL OF INFORMATION SECURITY SCIENCE, vol.12, no.3, pp.14-28, 2023 (Peer-Reviewed Journal)
2. **Secure Communication Based On Key Generation With Quantum Reinforcement Learning**
ÇAĞLAR E., YILMAZ İ.
INTERNATIONAL JOURNAL OF INFORMATION SECURITY SCIENCE, vol.12, no.2, 2023 (Peer-Reviewed Journal)
3. **Behaviour of Magnetized Strange Quark Matter in $f(R,T)$ Theory for General Kantowski-Sachs Model**
BAYSAL H., AYGÜN S., YILMAZ İ., AKTAŞ C.
International Journal of Innovative Approaches in Science Research, vol.6, no.2, pp.46-63, 2022 (Peer-Reviewed Journal)
4. **Secure Transmission of 3D-QRMW Quantum Images via Quantum Fourier Transform in Blind Cloud**
DOĞAN Ö., YILMAZ İ.
International Journal of Scientific and Technological Research, vol.5, no.5, pp.117-127, 2019 (Peer-Reviewed Journal)
5. **Security of NEQR Quantum Image by Using Quantum Fourier Transform with Blind Trent**
Şahin E., Yilmaz İ.
International Journal of Information Security Science, vol.7, no.1, pp.20-25, 2018 (Peer-Reviewed Journal)
6. **The Behaviour of Magnetized Strange Quark Matter on Bianchi V Universe in the Framework of $f(R,T)$ Theory**
AYGÜN S., AKTAŞ C., YILMAZ İ.
Archives of Current Research International, vol.11, no.2, pp.1-8, 2017 (Peer-Reviewed Journal)
7. **Quantum Group Proxy Digital Signature based on Quantum Fourier Transform by Using Blinded and Non Blinded Trent**
YILMAZ İ.
International Journal of information security science, vol.6, no.4, pp.79-86, 2017 (Peer-Reviewed Journal)

Books & Book Chapters

1. **Denizati Optimizasyon Algoritması**

YILMAZ İ., ÇAĞLAR E.

in: Teknobilim-2023 Optimizasyon Modelleme ve Yapay Zeka Optimizasyon Algoritmaları, KÖSE Bayram, DEMİRTÜRK Bahar, Editor, Efeakademi Yayınları, İstanbul, pp.323-336, 2023

Refereed Congress / Symposium Publications in Proceedings

1. **PREDICTING ANTIBIOTIC RESISTANCE OF MYCOBACTERIUM TUBERCULOSIS PATHOGEN USING QUANTUM MACHINE LEARNING**
Kaya F., Yılmaz İ.
8. ULUSLARARASI ANKARA BİLİMSEL ARAŞTIRMALAR KONGRESİ, Ankara, Turkey, 9 - 11 June 2023, pp.764-768
2. **DISTRIBUTED SIMULATION OF QUANTUM NETWORKS USING EMBEDDED DEVICES**
Ceylan O. S., Yılmaz İ.
8. ULUSLARARASI ANKARA BİLİMSEL ARAŞTIRMALAR KONGRESİ, Ankara, Turkey, 9 - 11 June 2023, pp.762-763
3. **KUANTUM ANAHTAR DAĞITIM PROTOKOLLERİNİN SİMÜLE EDİLEREK KARŞILAŞTIRILMASI: BB84 ve B92**
ÇAĞLAR E., YILMAZ İ., ŞAHİN E.
15th International Computer and Instructional Technologies Symposium (ICITS 2022), Çanakkale, Turkey, 7 - 09 September 2022
4. **Configuring Simulator Computers for Quantum Computers and Their Use in Teaching**
YAŞAR C., CEYLAN O. S., ÖZCEYLAN E., YILMAZ İ.
Summer School on "Federated Digital Infrastructures in Education, Scientific Research and Innovation", BÜKREŞ, Romania, 5 - 07 September 2022
5. **Kuantum Dijital İmza Teknolojilerini Kullanarak Kuantum Elektronik İmza Geliştirmek**
YAŞAR C., YILMAZ İ.
12. Uluslararası Bilgi Güvenliği ve Kriptoloji Konferansı, Ankara, Turkey, 16 - 17 October 2019, pp.1
6. **Secure Distribution of Electronic Documents over Network in Quantum Information Management Systems**
YAŞAR C., YILMAZ İ.
3rd International Symposium on Multidisciplinary Studies and Innovative Technologies, ISMSIT 2019, Ankara, Turkey, 11 - 13 October 2019
7. **Quantum Based Information Transmission in Electronic Document System**
Yaşar C., Yılmaz İ.
2nd International Symposium on Multidisciplinary Studies and Innovative Technologies, Ankara, Turkey, 19 - 21 October 2018, vol.1, no.1, pp.8-18
8. **Defining Metadata Model for Quantum Information Theory of Electronic Document Management System**
YAŞAR C., YILMAZ İ.
Turkish Physical Society 34. International Physics Congress, Muğla, Turkey, 5 - 09 September 2018, vol.1, pp.227
9. **Information Transmission Based on Quantum in Electronic Document System**
Yaşar C., Yılmaz İ.
2nd International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), Kizilcahamam, Turkey, 19 - 21 October 2018, pp.506-509
10. **Dark Matter And Dark Energy Solutions Using By Observational Evidence**
Demirel E. C. G., Yılmaz İ.
33rd International Physics Congress of the Turkish-Physical-Society (TPS), Bodrum, Turkey, 6 - 10 September 2017, vol.1935
11. **Liquid Dilinde E-İmza Simulasyonu**
ŞAHİN M., YILMAZ İ.
International Conference On Computer Science And Engineering, Tekirdağ, Turkey, 20 - 23 October 2016, vol.1, no.1, pp.768-774

12. **RIGIDLY ROTATING GÖDEL TYPE WORMHOLE**
ULU DOĞRU M., YILMAZ İ.
TÜRK FİZİK DERNEĞİ 32. ULUSLARARASI FİZİK KONGRESİ, 6 - 09 September 2016
13. **Multi-Partied Quantum Digital Signature Scheme Without Assumptions On Quantum Channel Security**
Sahin M., YILMAZ İ.
International Conference on Quantum Science and Applications (ICQSA), Eskişehir, Turkey, 25 - 27 May 2016, vol.766
14. **NEW QUANTUM PROGRAMMING LANGUAGE:QDIL**
ŞAHİN M., YILMAZ İ.
Türk Fizik Derneği 31. Uluslararası Fizik Kongresi, Muğla, Turkey, 21 - 24 July 2014, pp.260
15. **Yüksek Boyutta Chaplygin Gazın Termodinamiği**
GÜNAY DEMİREL E. C., YILMAZ İ.
Sunum, Turkey, 31 August 2010

Academic and Administrative Experience

2019 - 2022	Head of Department	Canakkale Onsekiz Mart University, Mühendislik Fakültesi, Bilgisayar Mühendisliği
2019 - 2022	Head of Department	Canakkale Onsekiz Mart University, Mühendislik Fakültesi, Bilgisayar Mühendisliği
2018 - 2019	Head of Department	Canakkale Onsekiz Mart University, Mühendislik Fakültesi, Elektrik-Elektronik Mühendisliği
2014 - 2017	Head of Department	Canakkale Onsekiz Mart University, Mühendislik Fakültesi, Bilgisayar Mühendisliği
2012 - 2013	Dean	Maltepe University, Faculty Of Arts And Sciences
2011 - 2013	Vice Rector	Maltepe University, Faculty Of Engineering And Natural Sciences
2010 - 2011	Vice Rector	Canakkale Onsekiz Mart University, Fen Fakültesi
2007 - 2010	Dean	Canakkale Onsekiz Mart University, Fen Fakültesi
2003 - 2007	Head of Department	Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik
2003 - 2006	Head of Department	Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik
2001 - 2001	Deputy Head of Department	Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik

Courses

Quantum Computers-I, Undergraduate, 2021 - 2022, 2019 - 2020, 2018 - 2019, 2017 - 2018
Quantum Algorithms II, Postgraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018
Quantum Computers-II, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018
Quantum Algorithms I, Postgraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018

Advising Theses

Yılmaz İ., Bazı tıbbi görüntülerin kuantum teknolojik yöntemler ile analizi, Postgraduate, N.DURMUŞ(Student), 2022
Yılmaz İ., Hibrit kuantum-klasik makine öğrenmesi ile KOVID-19 tespiti, Postgraduate, E.ACAR(Student), 2021
Yılmaz İ., Kuantum bilgi işlem temelli elektronik imza yazılımı geliştirilmesi, Doctorate, C.YAŞAR(Student), 2020
Yılmaz İ., Kuantum Temelli Görüntü İşleme, Doctorate, E.ŞAHİN(Student), 2019
Yılmaz İ., Kuantum temelli gözetimli bazı makine öğrenme algoritmalarının gerçekleştirimi, Postgraduate, Ö.ERYILMAZ(Student), 2019
YILMAZ İ., Kuantum bilgisayarları ve bazı uygulamalar, Doctorate, M.ŞAHİN(Student), 2014
YILMAZ İ., Karanlık madde ve karanlık enerji çözümleri, Doctorate, G.DEMİREL(Student), 2009
YILMAZ İ., Kuark gluon maddenin uzay zaman geometrisi, Doctorate, C.AKTAŞ(Student), 2008
YILMAZ İ., $f(R)$ gravite teorileri, Postgraduate, İ.ŞENER(Student), 2008
YILMAZ İ., Kurt delikleri, karanlık enerji ve madde ilişkileri, Doctorate, M.AYGÜN(Student), 2007
YILMAZ İ., Erken evrendeki bazı topolojik yapıların oluşumu ve gravitasyonel alanları, Postgraduate, M.AYGÜN(Student), 2005
YILMAZ İ., Kara delik çözümleri, Postgraduate, T.İKBAL(Student), 2004

Patent

Çağlar E., YILMAZ İ., KUANTUM TEMELLİ BİLGİ GÜVENLİĞİ İÇİN KUANTUM TAKVİYELİ ÖĞRENME İLE ANAHTAR ÜRETİMİ VE GÜVENLİ İLETİŞİM YÖNTEMİ, Patent, CHAPTER H Electricity, The Invention Registration Number: TR2021019962B , Standard Registration, 2022
Şahin E., Yılmaz İ., YEREL OLMAYAN ÇOKLU KUBIT KONTROLLÜ BİRİMSEL KUANTUM KAPILARIN UYGULANMASINA İLİŞKİN YÖNTEM, Patent, CHAPTER B Implementation of Operations; Transport, The Invention Registration Number: TR 2020 16705 , Standard Registration, 2022

Metrics

Publication: 87
Citation (WoS): 438
Citation (Scopus): 520
H-Index (WoS): 13
H-Index (Scopus): 15

Research Areas

Computer Sciences, Equipment, Quantum Calculation, Physics, General Physics, Relativity and Gravitation, Natural Sciences, Engineering and Technology