

## Assoc. Prof. HARUN ARTUNER

### Personal Information

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### International Researcher IDs

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### Biography

Graduated from Ankara University Physics Engineering Department in 1982, Assist. Assoc. Dr. Harun ARTUNER completed his PhD in Computer Engineering at Hacettepe University in 1990-1994. He is still working as a lecturer in the same department. At the same time, he was the Founder of Hacettepe University Forensic Informatics Research and Application Center and is a member of the board of directors. He continues his studies on Digital Signal Processing, Speech Recognition, Embedded Systems, Artificial Understanding and Forensic Informatics.

### Education Information

Doctorate, Hacettepe University, Fen Bilimleri Enstitüsü, Bilgisayar Bilimleri Mühendisliği (Dr), Turkey 1987 - 1994

Postgraduate, Hacettepe University, Fen Bilimleri Enstitüsü, Bilgisayar Bilimleri Mühendisliği (YI) (Tezli), Turkey 1982 - 1987

Undergraduate, Ankara University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, Turkey 1977 - 1982

### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, Bir türkçe fonem kümeleme sistemi tasarımı ve gerçekleştirimi, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Bilgisayar Bilimleri Mühendisliği (Dr), 1994

Postgraduate, Inter 8 ikil tek kart mikrobilgisayar donanımları için katman yapılı bir işletim dizgesi (CP/M) tasarım ve gerçekleştirimi, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Bilgisayar Bilimleri Mühendisliği (YI) (Tezli), 1987

### Research Areas

Computer Sciences, Equipment, Microprogramming and Control Structure, Artificial Intelligence, Computer Learning and

## Academic and Administrative Experience

Hacettepe Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2012 - Continues

Hacettepe Üniversitesi, Mühendislik Fakültesi, Bilgisayar Bilimleri Mühendisliği Bölümü, 2012 - Continues

Hacettepe Üniversitesi, Bilişim Enstitüsü, Bilişim Sistemleri Anabilim Dalı, 2003 - 2012

## Advising Theses

ARTUNER H., İleri gözetleyici faaliyetlerinin nesne yönelimli olarak modellenmesi, Postgraduate, A.BÜLBÜL(Student), 2004

ARTUNER H., Bir sanal eğitim destek sistemi tasarım ve uygulaması: Nadir 1000A, Postgraduate, B.AKÇAY(Student), 2003

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

- I. **A novel approach detection for IIoT attacks via artificial intelligence**  
Karacayılmaz G., ARTUNER H.  
CLUSTER COMPUTING-THE JOURNAL OF NETWORKS SOFTWARE TOOLS AND APPLICATIONS, no.8, pp.10467-10485, 2024 (SCI-Expanded)
- II. **A Siamese Neural Network for Learning Semantically-Informed Sentence Embeddings**  
Bölücü N., Can B., ARTUNER H.  
Expert Systems with Applications, vol.214, 2023 (SCI-Expanded)
- III. **Turkish dialect recognition in terms of prosodic by long short-term memory neural networks**  
IŞIK G., ARTUNER H.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.35, no.1, pp.213-224, 2020 (SCI-Expanded)
- IV. **Application of Decision Tree Algorithm for classification and identification of natural minerals using SEM-EDS**  
AKKAŞ E., AKIN L., ÇUBUKÇU H. E., ARTUNER H.  
COMPUTERS & GEOSCIENCES, vol.80, pp.38-48, 2015 (SCI-Expanded)
- V. **Forward and back substitution algorithms on GPU: a case study on modified incomplete Cholesky Preconditioner for three-dimensional finite difference method**  
Aksari Y., ARTUNER H.  
JOURNAL OF SUPERCOMPUTING, vol.62, no.1, pp.550-572, 2012 (SCI-Expanded)
- VI. **Efficient and Scalable Routing Algorithms for Collective Communication Operations on 2D All-Port Torus Networks**  
İMRE K. M., Baransel C., ARTUNER H.  
INTERNATIONAL JOURNAL OF PARALLEL PROGRAMMING, vol.39, no.6, pp.746-782, 2011 (SCI-Expanded)
- VII. **Clustering of volcanic ash arising from different fragmentation mechanisms using Kohonen self-organizing maps**  
Ersoy O., Aydar E., Gourgaud A., Artuner H., Bayhan H.  
COMPUTERS & GEOSCIENCES, vol.33, no.6, pp.821-828, 2007 (SCI-Expanded)

## Articles Published in Other Journals

- I. **LSTM-Based Deep Learning Methods for Prediction of Earthquakes Using Ionospheric Data**  
Abri R., ARTUNER H.

Gazi University Journal of Science, vol.35, no.4, pp.1417-1431, 2022 (Scopus)

- II. **Derin Öğrenme Mimarilerinde Akustik ve Fonotaktik Öznitelikleri Kullanan Türkçe Ağız Tanıma**  
IŞIK G., ARTUNER H.

Bilişim Teknolojileri Dergisi, vol.13, no.3, pp.207-216, 2020 (Peer-Reviewed Journal)

- III. **Dağıtılmış Anahtarlamalı Özdirenç Görüntüleme Sistemi**

ULUSOY İ., ARTUNER H., Aydar E.

Yerbilimleri, vol.33, pp.205-218, 2012 (Peer-Reviewed Journal)

## **Refereed Congress / Symposium Publications in Proceedings**

- I. **Cyber Attack Detection with Encrypted Network Connection Analysis**

GÖNEN S., Karacayılmaz G., ARTUNER H., BARIŞKAN M. A., YILMAZ E. N.

12th International Symposium on Intelligent Manufacturing and Service Systems, IMSS 2023, İstanbul, Turkey, 26 - 28 May 2023, pp.622-629

- II. **Predicting Earthquakes with Ionospheric Data: A Hybrid Approach Utilizing Deep AutoEncoder and LSTM Networks**

Abri R., Abri S., ARTUNER H., Cetin S.

3rd International Conference on Computing and Machine Intelligence (ICMI), Michigan, United States Of America, 13 - 14 April 2024

- III. **Big Data Analysis of Ionosphere Disturbances using Deep Autoencoder and Dense Network**

Abri R., ARTUNER H., Abri S., Cetin S.

11th International Conference on Data Science, Technology and Applications (DATA), Lisbon, Portugal, 11 - 13 July 2022, pp.158-167

- IV. **A Dataset For Turkish Dialect Recognition and Classification with Deep Learning**

Isik G., ARTUNER H.

26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018

- V. **Fusion of ionosonde measurements and TEC estimations using statistical techniques**

KÖROĞLU O., ARIKAN F., TOKER C., ARTUNER H., Mošna Z.

The second VarSITI General Symposium (VarSITI-2017), Irkutsk, Russia, 10 - 15 July 2017

- VI. **SPACE WEATHER STUDIES OF IONOLAB GROUP**

ARIKAN F., SEZEN U., TOKER C., ARTUNER H., BULU G., DEMİR U., ERDEM E., ARIKAN O., TUNA H., KARATAY S., et al.

URSI Asia-Pacific Radio Science Conference (URSI AP-RASC), Seoul, South Korea, 21 - 25 August 2016, pp.1136-1139

- VII. **Recognition of Radio Signals with Deep Learning Neural Networks**

IŞIK G., ARTUNER H.

24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.837-840

- VIII. **Improved IONOLAB TEC Space Weather Service**

ARIKAN F., SEZEN U., TOKER C., BULU G., ARTUNER H., KARATAY S.

IRI 2015 Workshop KMITL, 9 - 13 November 2015

- IX. **Online IRI Plas Interface Service by IONOLAB**

ARIKAN F., TL G., TOKER C., SEZEN U., ARTUNER H.

IRI 2015 Workshop KMITL, 9 - 13 November 2015

- X. **Application of decision tree algorithm for identification of rock forming minerals using energy dispersive spectrometry**

AKKAŞ E., ÇUBUKÇU H. E., ARTUNER H.

EGU 2014, VİYANA, Austria, 27 April - 02 May 2014, vol.16, pp.532

- XI. **Enerji Dağılım Spektroskopisi Kullanılarak Gerçek Zamanlı Otomatik Mineral Sınıflandırılması**

AKKAŞ E., ÇUBUKÇU H. E., ARTUNER H.

67. Türkiye Jeoloji Kurultayı, Ankara, Turkey, 14 - 18 April 2014

- XII. **A Syllable-Based Turkish Speech Recognition System by Using Time Delay Neural Networks (TDNNs)**  
CAN BUĞLALILAR B., ARTUNER H.  
International Conference of Soft Computing and Pattern Recognition (SoCPaR), Ha-Noi, Vietnam, 15 December 2013 - 18 December 2015, pp.219-224
- XIII. **Efficient Mass Balancing of Flowsheet Data**  
CESUR B., ARTUNER H., M ALİ S.  
the 2012 International Conference on Systems and Informatics (ICSAI2012), Yantai, China, 10 - 12 October 2012
- XIV. **Active Authentication by Mouse Movements**  
Aksari Y., ARTUNER H.  
24th International Symposium on Computer and Information Sciences, Güzelyurt, Cyprus (Kktc), 14 - 16 September 2009, pp.569-572

## **Metrics**

Publication: 24  
Citation (WoS): 73  
Citation (Scopus): 62  
H-Index (WoS): 4  
H-Index (Scopus): 2

## **Non Academic Experience**

TELLUS A.Ş.