# Asst. Prof. YILDIRAN YILMAZ

## Personal Information

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**International Researcher IDs**
ScholarID: HfyM3c0AAAAJ
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Yoksis Researcher ID: 319119

## Education Information

Doctorate, University of Southampton, Electronic and Computer Science, Computer Science, United Kingdom 2015 - 2019
Postgraduate, University of Southampton, Electronic and Computer Science, Cyber Security, United Kingdom 2014 - 2015
Undergraduate, Pamukkale University, Faculty Of Engıneerıng, Department Of Computer Engıneerıng, Turkey 2006 - 2010

## Foreign Languages

English, C2 Mastery

## Dissertations

Doctorate, LOW-COST SECURITY PROTOCOLS FOR RESOURCE-CONSTRAINED INTERNET OF THINGS DEVICES, University of Southampton, Electronic and Computer Science, Computer Science, 2019
Postgraduate, Crypto Tool for File and Text Encryption, University of Southampton, Electronic and Computer Science, Cyber Security, 2015

## Research Areas

Computer Sciences, Engineering and Technology

## Academic Titles / Tasks

Assistant Professor, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, BİLGİSAYAR MÜHENDİSLİĞİ, 2021 - Continues
Lecturer PhD, Recep Tayyip Erdogan University, Mühendislik Fakültesi, Bilişim Sistemleri Mühendisliği Bölümü, 2020 - Continues

## Academic and Administrative Experience

## Academic and Administrative Experience

Deputy Head of Department, Recep Tayyip Erdogan University, MÜHENDİSLİK VE MİMARLIK FAKÜLTESİ, BİLGİSAYAR MÜHENDİSLİĞİ, 2020 - Continues

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

I. **Stacked ensemble modeling for improved tuberculosis treatment outcome prediction in pediatric cases**
YILMAZ Y.
Concurrency and Computation: Practice and Experience, 2024 (SCI-Expanded)

II. **Accuracy improvement in Ag:a-Si memristive synaptic device-based neural network through Adadelta learning method on handwritten-digit recognition**
YILMAZ Y.
Neural Computing and Applications, vol.35, no.33, pp.23943-23958, 2023 (SCI-Expanded)

III. **A novel framework for strength prediction of geopolymer mortar: Renovative precursor effect**
KURT Z., YILMAZ Y., ÇAKMAK T., Ustabaş I.
Journal of Building Engineering, vol.76, 2023 (SCI-Expanded)

IV. **Correlation value determined to increase Salmonella prediction success of deep neural network for agricultural waters**
Buyrukoglu S., YILMAZ Y., TOPALCENGİZ Z.
ENVIRONMENTAL MONITORING AND ASSESSMENT, vol.194, no.5, 2022 (SCI-Expanded)

V. **Comparative Analysis of Energy Costs of Asymmetric vs Symmetric Encryption-Based Security Applications**
Halak B., YILMAZ Y., Shiu D.
IEEE ACCESS, vol.10, pp.76707-76719, 2022 (SCI-Expanded)

VI. **ARMOR: An anti-counteRfeit security Mechanism for lOw cost Radio frequency identification systems**
YILMAZ Y., Do V., Halak B.
IEEE TRANSACTIONS ON EMERGING TOPICS IN COMPUTING, vol.9, pp.2125-2138, 2021 (SCI-Expanded)

## Articles Published in Other Journals

I. **Convolutional neural network for pothole detection in different road and weather conditions**
Gazawy Q., Buyrukoglu S., YILMAZ Y.
MediHealth Academy, vol.1, 2023 (Peer-Reviewed Journal)

II. **Novel Machine Learning (ML) Algorithms to Classify IPv6 Network Traffic in Resource-Limited Systems**
YILMAZ Y., BUYRUKOĞLU S., ALIM M.
Computer Science, pp.219-224, 2022 (Peer-Reviewed Journal)

III. **Development and evaluation of ensemble learning models for detection of DDOS attacks in IoT**
YILMAZ Y., Buyrukoglu S.
Hittite Journal of Science and Engineering, vol.9, no.2, pp.73-82, 2022 (Peer-Reviewed Journal)

IV. **An Approach for Airfare Prices Analysis with Penalized Regression Methods**
Buyrukoglu S., Yılmaz Y.
Veri Bilimi Dergisi, vol.4, no.2, pp.57-61, 2021 (Peer-Reviewed Journal)

V. **A Novel Semi-Automated Chatbot Model: Providing Consistent Response of Students' Email in Higher Education based on Case-Based Reasoningand Latent Semantic Analysis**
Buyrukoglu S., Yılmaz Y.
International Journal of Multidisciplinary Studies and Innovative Technologies, vol.5, no.1, pp.6-12, 2021 (Peer-Reviewed Journal)

VI. **Hybrid Machine Learning Model Coupled with School Closure For Forecasting COVID-19 Cases in the**

Most Affected Countries

Yılmaz Y., Buyrukoglu S.

Hittite Journal of Science and Engineering, vol.8, no.2, pp.123-131, 2021 (Peer-Reviewed Journal)

VII. **Covid-19 Impact on Students' Performances in Computer Programming Module Based on Formative Assessment**

Buyrukoğlu S., Yılmaz Y., Buyrukoğlu G.

World Journal of Multidisciplinary Research, vol.4, no.1-2, pp.87-94, 2021 (Peer-Reviewed Journal)

VIII. **ASSURE: A Hardware-Based Security Protocol for Resource-Constrained IoT Systems**

Yılmaz Y., Aniello L., Halak B.

Journal of Hardware and Systems Security, vol.5, no.1, pp.1-18, 2021 (Peer-Reviewed Journal)

## Books & Book Chapters

I. **Doğrusal Regresyon Makine Öğrenmesi Metodunu Kullanarak AES ile Şifrelenmiş Tcp/Ip Paketlerinin Ipsec Güvenlikli Ağda Aktarim Süresi Tahmini**

YILMAZ Y.

in: Teori ve Uygulamada Makine Öğrenmesi, Buyrukoglu Selim, Savaş Serkan, Editor, Nobel Bilimsel, pp.21-35, 2022

II. **A Hybrid Data Mining Model for Prediction of Alzheimer Disease Stages Using Principal Component Analysis (PCA) and Multilayer Perceptron (MLP)**

YILMAZ Y.

in: Programming Solutions For Engineering Problems, Ayhan Akbaş Selim Buyrukoğlu Aytül Gökçe, Editor, Nobel Bilimsel, pp.13-35, 2021

III. **ASSURE: A Hardware-Based Security Protocol for Internet of Things Devices**

YILMAZ Y., Aniello L., Halak B.

in: Authentication of Embedded Devices, Halak, Basel, Editor, Springer, pp.55-87, 2021

IV. **TIGHTEN: A Two-Flight Mutual Authentication Protocol for Energy-Constrained Devices**

YILMAZ Y., Halak B.

in: Authentication of Embedded Devices, Halak, Basel, Editor, Springer, pp.89-112, 2021

V. **Anti-counterfeiting Techniques for Resources-Constrained Devices**

YILMAZ Y., Do V., Halak B.

in: Hardware Supply Chain Security, Halak, Basel, Editor, Springer, pp.89-126, 2021

## Refereed Congress / Symposium Publications in Proceedings

I. **TIME SERIES ANALYSIS AND DATA MINING FOR ROBUST SHORT-TERM COMPRESSIVE STRENGTH FORECASTING IN GEOPOLYMER MORTAR: AN ARIMA MODEL DATADRIVEN APPROACH**

Yılmaz Y., Çakmak T.

1st International Future Engineering Conference, Şırnak, Turkey, 25 - 26 December 2023, pp.24-30

II. **ANOVA Method Reveals Key Factors Influencing Geopolymer Strength: A Comprehensive Evaluation of Input Variables**

YILMAZ Y., ÇAKMAK T., KURT Z.

7th International Symposium on Innovative Approaches in Smart Technologies, ISAS 2023, İstanbul, Turkey, 23 - 25 November 2023

III. **Seamlessly Implementable ML based Authentication Method for Resource-Scarce Embedded Systems**

YILMAZ Y.

1st International Karatekin Science and Technology Conference, Çankırı, Turkey, 1 - 03 September 2022, pp.220-221

IV. **MÜŞTERİLERİN KURUMSAL SOSYAL SORUMLULUKLARA (KSS) YAKLAŞIMLARININ VE BUNUN MÜŞTERİ SATIN ALMA DAVRANIŞI ÜZERİNDEKİ ETKİSİNİN ANALİZİ**

ALIM M., YILMAZ Y.

4. Uluslararası Mersin Sempozyumu, 22 - 24 October 2020, vol.4, pp.362-370

V. **A Two-Flights Mutual Authentication for Energy-Constrained IoT Devices**

Yılmaz Y., Halak B.

2019 IEEE 4th International Verification and Security Workshop (IVSW), Rodos, Greece, 1 - 03 July 2019, pp.31-36

VI. **On the Design and Implementation of Security Protocol forResource-constrained IoT**

YILMAZ Y., Halak B.

The C-IoT organised event on ECS PhD research into IoT, Southampton, United Kingdom, 20 February 2019

VII. **On the Design and Implementation of Lightweight Authentication and Secure Key Exchange Protocol for Energy-Constrained Systems**

YILMAZ Y., Halak B.

The SET Group Event on Analog Circuit Security in the Digital World, Southampton, United Kingdom, 12 February 2019

VIII. **Hardware-Based Security Solutions for the Internet of Things**

Halak B., Mark Z., Shengyu D., Elena Woo Lai L., Yılmaz Y., Syafiq M.

RISE Annual Conference, 2018, London, United Kingdom, 14 November 2018

IX. **Lightweight PUF-Based Authentication Protocol for IoT Devices**

YILMAZ Y., Gunn S. R., Halak B.

2018 IEEE 3rd International Verification and Security Workshop (IVSW), Costa Brava, 2 - 04 July 2018

X. **Lightweight Authentication Protocol for IoT Devices**

Yılmaz Y., Gunn S. R., Halak B.

The C-IoT Security Event at the University of Southampton, Southampton, United Kingdom, 26 June 2018

XI. **PUF-based Authentication and Secure Communication Protocol for Resource-constrained Devices in the Internet of Things**

YILMAZ Y., Halak B.

NCSC Workshop on Safety vsSecurity: challenges and applicationsin the cybersecurity era, Southampton, United Kingdom, 14 January 2018

XII. **Security Protocols for Resource-Constrained Devices**

Yılmaz Y., Basel H.

Arm Research Summit 2017, London, United Kingdom, 11 - 13 September 2017

XIII. **Cryptotool: A secure data storage software**

YILMAZ Y., Halak B.

The National Conference on Learning and Teaching in Cybersecurity, Birmingham, United Kingdom, 15 June 2016

## Supported Projects

Gül F., Eroğlu H., Yılmaz Y., TUBITAK Project, Gıda Güvenliginde Sevkiyat Ve Soguk Zincir Uygulamaları Için, Nesnelerin Interneti (Iot) Tabanlı, Çok Amaçlı Takip Cihazı Gelistirilmesi, 2022 - 2024

## Metrics

Publication: 32

Citation (WoS): 36

Citation (Scopus): 46

H-Index (WoS): 2

H-Index (Scopus): 2