

## Asst. Prof. Murat Koca

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: GRR-6566-2022

Yoksis Researcher ID: 12414

### Education Information

Doctorate, İstanbul University-Cerrahpaşa, Institute Of Graduate Education, Department Of Computer Engineering, Turkey 2016 - 2021

Postgraduate, Karabuk University, Institution Of Natural Sciences, Computer Engineering, Turkey 2011 - 2014

### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, Design of an Intrusion Detection System Against Cyber Attacks in Big Data Log Management, İstanbul University-Cerrahpaşa, Institute Of Graduate Education, Department Of Computer Engineering, 2021

Postgraduate, Development Of Shading Algorithms Used For Real-Time Image Formation With Cuda Library, Karabuk University, Institution Of Natural Sciences, Department Of Computer Engineering, 2013

### Research Areas

Computer Sciences, algorithms, Information Security and Reliability, Hiding Information, Information System Reliability, Software Security, Computer Networks, Communications and Network Protocols, Data Routing, Augmented Reality, Information Visualization, Virtual Reality, Artificial Intelligence, Computer Learning and Pattern Recognition, Computer Learning, Natural Language Processing, Automated Problem Solving, Theorem Proving and Logical Reasoning, Pattern Recognition and Image Processing, Neural Networks, Operating Systems, Automatic Programming, Programming Languages, Software Engineering

### Academic Titles / Tasks

Assistant Professor, Van Yüzüncü Yil University, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2022 - Continues  
Lecturer, Hakkari University, Health Services Vocational School, Department Of Medical Services And Techniques, 2010 - 2020

Expert, Hakkari University, Çölemerik Vocational School, Department Of Computer Technologies, 2009 - 2010

## Academic and Administrative Experience

Technology Transfer Office Manager, Van Yüzüncü Yil University, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2022 - Continues

Assistant Director of Vocational School, Hakkari University, Health Services Vocational School, 2011 - 2018

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

- I. **Intelligent Transportation System Technologies, Challenges and Security**  
Avcı İ., Koca M.  
Applied Sciences (Switzerland), vol.14, no.11, 2024 (SCI-Expanded)
- II. **A Novel Security Risk Analysis Using the AHP Method in Smart Railway Systems**  
Avcı İ., Koca M.  
Applied Sciences (Switzerland), vol.14, no.10, 2024 (SCI-Expanded)
- III. **Real-time Security Risk Assessment from CCTV using Hand Gesture Recognition**  
Koca M.  
IEEE Access, vol.12, pp.84548-84555, 2024 (SCI-Expanded)
- IV. **Predicting DDoS Attacks Using Machine Learning Algorithms in Building Management Systems**  
Avcı İ., Koca M.  
Electronics (Switzerland), vol.12, no.19, 2023 (SCI-Expanded)
- V. **Cybersecurity Attack Detection Model, Using Machine Learning Techniques**  
Avcı İ., Koca M.  
Acta Polytechnica Hungarica, vol.20, no.7, pp.29-44, 2023 (SCI-Expanded)
- VI. **A new distributed anomaly detection approach for log IDS management based on deep learning**  
Koca M., AYDIN M. A., Sertbas A., Zaim A. H.  
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.29, no.5, pp.2486-2501, 2021 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Classification of Malicious URLs Using Naive Bayes and Genetic Algorithm**  
Koca M., AVCI D. İ., AL-HAYANI M. A. S.  
Sakarya University Journal of Computer and Information Sciences (Online), vol.6, no.2, pp.80-90, 2023 (Peer-Reviewed Journal)
- II. **SQL Injection Cyber-Attack Scenario and Security Measures in Windows-Based Applications**  
Avcı İ., Koca M., Atasoy M.  
Avrupa Bilim ve Teknoloji Dergisi, vol.28, pp.213-219, 2021 (Peer-Reviewed Journal)
- III. **A Survey of Hybrid Main Memory Architectures**  
Çavdar Z. Y., Avcı İ., Koca M., Sertbaş A.  
SAKARYA UNIVERSITY JOURNAL OF SCIENCE, vol.23, no.1, pp.1-15, 2019 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Siber Güvenlik Yönetim Sistemi**  
AVCI İ., KOCA M.  
in: Mühendislik Alanında Uluslararası Araştırmalar, Alper BİDECI, Editor, Platanus Publishing, Ankara, pp.164-183,

2023

**II. The Place of Stock Photography as a Digital Commerce in Turkey**

Avcı İ., Koca M., Uysal B.

in: Innovations in Smart Cities Applications Volume 5, Ben Ahmed M.,Boudhir A.A.,Karaş İ.R.,Jain V.,Mellouli S., Editor, Springer, Cham, Basel, pp.89-102, 2022

**Refereed Congress / Symposium Publications in Proceedings**

**I. Investigation of Cyber Kill Chain and Attacks Prevention Methods**

Avcı İ., Özarpa C., Koca M., Yıldırım M., Yıldırım E.

IX. International Advanced Technologies Symposium Instructions for Authors, Elazığ, Turkey, 28 - 29 November 2021, pp.12-25

**II. SQL Injection Cyber-Attack Scenario and Security Measures in Windows- Based Applications**

Avcı İ., Koca M., Atasoy M.

1st International Conference on Applied Engineering and Natural Sciences ICAENS 2021, Konya, Turkey, 1 - 03 November 2021, pp.210-225

**III. COVID-19 Pozitif Vakaları Tahmin Etmek İçin Derin Öğrenme Yöntemleri ve Analizi**

Avcı İ., Koca M.

IX. International Advanced Technologies Symposium (IATS'21), Elazığ, Turkey, 27 - 28 October 2021, pp.250-272

**IV. A Survey of Cyber Security Vulnerabilities and Security Methods on Big Data**

Koca M., Aydın M. A.

8 th International Advanced Technologies Symposium (IATS'17), Elazığ, Turkey, 19 - 21 October 2017, vol.3, pp.554-560

**V. A Survey of Optical Networks Vulnerabilities and Solutions**

Koca M., Avcı İ., Çavdar Z. Y., Aydın M. A.

8 th International Advanced Technologies Symposium (IATS'17), Elazığ, Turkey, 19 - 21 October 2017, vol.3, pp.410-420

**Supported Projects**

Koca M., Development Agency, Hakkâri'de Geleneksel El Sanatlarının Modernizasyonu ve Ekonomik Yaşama Entegrasyonu Projesi, 2019 - 2022

Koca M., Development Agency, Engelleri Üreterek Aşıyorum Projesi, 2018 - 2022

Koca M., Development Agency, Maden Zenginleştirilmesine Yönelik Teknoloji Kullanım Alt Yapısının İncelenmesi, 2019 - 2019

Koca M., Development Agency, Siber Güvenlik Temel Seviye Eğitimi, 2019 - 2019

**Scientific Refereeing**

Technical Gazette, Journal Indexed in SCI-E, September 2022