

## Asst. Prof. GÜL TAHAOĞLU

### Personal Information

Office Phone: [+90 462 377 3256](tel:+904623773256)

Other Email: [gultahaoglu@ktu.edu.tr](mailto:gultahaoglu@ktu.edu.tr)

Web: <https://avesis.ktu.edu.tr/gultahaoglu>

### International Researcher IDs

ORCID: 0000-0002-8828-5674

Publons / Web Of Science ResearcherID: AAK-5783-2021

ScopusID: 57221788047

Yoksis Researcher ID: 117059



### Education Information

Post Doctorate, Universita Degli Studi di Firenze, School of Engineering, Department of Information Engineering, Italy 2023 - Continues

Doctorate, Karadeniz Technical University, Mühendislik Fakültesi, Bilgisayar Mühendisliği, Turkey 2016 - 2021

Postgraduate, Karadeniz Technical University, Mühendislik Fakültesi, Bilgisayar Mühendisliği, Turkey 2015 - 2016

Undergraduate, Erciyes University, Mühendislik Fakültesi, Bilgisayar Mühendisliği, Turkey 2008 - 2012

### Research Areas

Computer Sciences, Information Security and Reliability, Hiding Information, Database and Data Structures, Information Storage and Retrieval, Artificial Intelligence, Computer Learning and Pattern Recognition, Pattern Recognition and Image Processing, Engineering and Technology

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

- I. **Golden ratio based deep fake video detection system with fusion of capsule networks**  
Dinçer S., Ulutaş G., Ustubioglu B., Tahaoglu G., Sklavos N.  
COMPUTERS & ELECTRICAL ENGINEERING, vol.117, 2024 (SCI-Expanded)
- II. **Multi pattern features based spoofing detection mechanism using one class learning**  
Üstübioğlu B., Tahaoglu G., Üstübioğlu A., Ulutaş G., Amerini İ., Kılıç M.  
IEEE ACCESS, vol.12, pp.117523-117540, 2024 (SCI-Expanded)
- III. **Audio forgery detection and localization with super-resolution spectrogram and keypoint-based clustering approach**  
ÜSTÜBİOĞLU B., TAHAOĞLU G., ULUTAŞ G., Ustubioglu A., KILIÇ M.  
JOURNAL OF SUPERCOMPUTING, vol.80, no.1, pp.486-518, 2024 (SCI-Expanded)
- IV. **Robust Copy-Move Forgery Detection Technique Against Image Degradation and Geometric Distortion Attacks**  
Tahaoglu G., Üstübioğlu B., Ulutaş G., Ulutaş M., Nabiyev V.

- WIRELESS PERSONAL COMMUNICATIONS, vol.131, no.4, pp.2919-2947, 2023 (SCI-Expanded)
- V. **Color Image Splicing Localization Based on Block Classification Using Transition Probability Matrix**  
ODABAŞ YILDIRIM E., TAHAOĞLU G., ULUTAŞ G., ÜSTÜBİOĞLU B., NABIYEV V.  
WIRELESS PERSONAL COMMUNICATIONS, vol.129, no.3, pp.1893-1919, 2023 (SCI-Expanded)
- VI. **Detection of audio copy-move-forgery with novel feature matching on Mel spectrogram**  
ÜSTÜBİOĞLU B., TAHAOĞLU G., ULUTAŞ G.  
EXPERT SYSTEMS WITH APPLICATIONS, vol.213, 2023 (SCI-Expanded)
- VII. **Ciratefi based copy move forgery detection on digital images**  
TAHAOĞLU G., ULUTAŞ G., ÜSTÜBİOĞLU B., ULUTAŞ M., NABIYEV V.  
MULTIMEDIA TOOLS AND APPLICATIONS, vol.81, no.16, pp.22867-22902, 2022 (SCI-Expanded)
- VIII. **Improved copy move forgery detection method via L\*a\*b\* color space and enhanced localization technique**  
TAHAOĞLU G., ULUTAŞ G., ÜSTÜBİOĞLU B., NABIYEV V.  
MULTIMEDIA TOOLS AND APPLICATIONS, vol.80, no.15, pp.23419-23456, 2021 (SCI-Expanded)
- IX. **Detection of copy move forgery based on color SURF**  
Tahaoğlu G., Ulutaş G.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.34, pp.1540-1548, 2019 (SCI-Expanded)
- X. **Shredded banknotes reconstruction using AKAZE points**  
Nabiyev V., Yılmaz S., Günay Yılmaz A., Tahaoğlu G., Ulutaş G.  
FORENSIC SCIENCE INTERNATIONAL, vol.278, pp.280-295, 2017 (SCI-Expanded)
- XI. **A New Copy Move Forgery Detection Method Resistant to Object Removal with Uniform Background Forgery**  
Ulutaş G., Tahaoğlu G.  
MATHEMATICAL PROBLEMS IN ENGINEERING, vol.2016, 2016 (SCI-Expanded)

## Articles Published in Other Journals

- I. **A Review of Deepfake Audio Manipulation Detection Systems**  
Tahaoğlu G., Kılıç M., Üstübioğlu B., Ulutaş G.  
Yüzüncü Yıl Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.29, no.1, pp.353-402, 2024 (Peer-Reviewed Journal)
- II. **YÜKSEK ÇÖZÜNÜRLÜKLÜ SPEKTROGRAM GÖRÜNTÜLERİNDEN AKAZE YÖNTEMİ İLE SES SAHTECİLİĞİ TESPİTİ**  
Üstübioğlu B., Tahaoğlu G.  
Kahramanmaraş Sütçü İmam Üniversitesi Fen ve Mühendislik Dergisi, no.26/4, pp.962-970, 2023 (Peer-Reviewed Journal)
- III. **Copy-move forgery detection and localization with hybrid neural network approach**  
Tahaoğlu G., Ulutaş G.  
PAMUKKALE UNIVERSITY JOURNAL OF ENGINEERING SCIENCES-PAMUKKALE UNIVERSİTESİ MUHENDİSLİK BİLİMLERİ DERGİSİ, vol.1, no.1, pp.1, 2022 (ESCI)
- IV. **Blur Invariant Image Forgery Detection Method Using Local Phase Quantization**  
Üstübioğlu B., Baykal E., Tahaoğlu G., Ulutaş G.  
Journal of Energy and Power Engineering, vol.10, no.6, pp.358-363, 2016 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Copy-Move Audio Forgery Detection with Instantaneous Frequency**  
Kılıç M., Tahaoğlu G., Üstübioğlu B., Üstübioğlu A., Ulutaş G.  
2024 32nd Signal Processing and Communications Applications Conference (SIU), Mersin, Turkey, 15 - 18 May

2024, pp.1-4

- II. **Deepfake audio detection with vision transformer based method**  
Ulutaş G., Tahaoğlu G., Üstübioğlu B.  
46th International Conference on Telecommunications and Signal Processing, Brno, Czech Republic, 12 - 14 July 2023, pp.1-5
- III. **Deep Fake Video Detection Based on Enhanced Capsule Network with Golden Ratio**  
DİNÇER S., ÜSTÜBİOĞLU B., TAHAOĞLU G., ULUTAŞ G.  
31st IEEE Conference on Signal Processing and Communications Applications (SIU), İstanbul, Turkey, 5 - 08 July 2023
- IV. **Robust Audio Forgery Detection Method Based on Capsule Network**  
DİNÇER S., ÜSTÜBİOĞLU B., ULUTAŞ G., TAHAOĞLU G., Ustubioglu A.  
2023 International Conference on Electrical and Information Technology, IEIT 2023, Malang, Indonesia, 14 - 15 September 2023, pp.243-247
- V. **Forge Audio Detection Using Keypoint Features on Mel Spectrograms**  
ULUTAŞ G., TAHAOĞLU G., ÜSTÜBİOĞLU B.  
45th International Conference on Telecommunications and Signal Processing, TSP 2022, Virtual, Online, Czech Republic, 13 - 15 July 2022, pp.413-416
- VI. **Localization of Forgery on Audio Clips Using GLCM Features and Mel Spectrograms**  
ULUTAŞ G., Ustubioglu A., ÜSTÜBİOĞLU B., TAHAOĞLU G.  
45th International Conference on Telecommunications and Signal Processing, TSP 2022, Virtual, Online, Czech Republic, 13 - 15 July 2022, pp.314-317
- VII. **A new approach for localization of copy-move forgery in digital images**  
Tahaoğlu G., Ulutaş G., Üstübioğlu B.  
44th Telecommunication and Signal Processing, Brno, Czech Republic, 26 - 28 July 2021, pp.183-186
- VIII. **Ataklara Karşı Dayanıklı Yeni Bir Kopyala Yapıştır Sahteciliği Tespiti Yöntemi**  
Tahaoğlu G., Ulutaş G., Üstübioğlu B.  
Sinyal İşleme ve İletişim Uygulamaları Kurultayı (SIU2020), Gaziantep, Turkey, 5 - 07 October 2020, pp.1-3
- IX. **Copy Move Forgery Detection with Quadtree Decomposition Segmentation**  
Tahaoğlu G., Ulutaş G., Üstübioğlu B.  
43rd International Conference on Telecommunications and Signal Processing (TSP -2020), Milan, Italy, 7 - 09 July 2020, pp.1-5
- X. **A new deep learning-based method to detection of copy-move forgery in digital images**  
Tahaoğlu G., Ulutaş G.  
International Scientific Meeting on Electrical-Electronics and Biomedical Engineering and Computer Science (EBBT), İstanbul, Turkey, 24 - 26 April 2019
- XI. **Detection of Copy Move Forgery Technique Based on SIFT and SURF**  
Aydın Y., Tahaoğlu G., Ulutaş G.  
26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- XII. **A Copy-Move Forgery Detection Approach Based on Local Intensity Order Pattern and PatchMatch**  
Tahaoğlu G., Erdol E. S., Ulutaş G.  
26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- XIII. **Recent keypoint based copy move forgery detection techniques**  
Tahaoğlu G., Karaağaçlı E. S., Ulutaş G.  
2017 International Artificial Intelligence and Data Processing Symposium, IDAP 2017, Malatya, Turkey, 16 - 17 September 2017
- XIV. **A Fast and Effective Digital Image Copy Move Forgery Detection with Binarized SIFT**  
MUZAFFER G., ULUTAŞ G.  
40th International Conference on Telecommunications and Signal Processing (TSP), Barcelona, Spain, 5 - 07 July 2017, pp.595-598
- XV. **PSO and SURF based Digital Image Forgery Detection**  
Tahaoğlu G., Ulutaş G., Gedikli E.

2017 International Conference on Computer Science and Engineering (UBMK), Antalya, Turkey, 5 - 08 October 2017, pp.688-692

**XVI. MSER and SURF Based Digital Copy Move Forgery Detection**

Tahaoğlu G., Ulutaş G.

Uluslararası Bilgi Güvenliği ve Kriptoloji Konferansı 2016, Ankara, Turkey, 25 - 26 October 2016

**XVII. Copy Move Forgery Detection Using Gabor Filter and Scaled ORB**

Tahaoğlu G., Makul Ö., Üstübioğlu B., Ulutaş G.

International Conference on Image Processing, Production and Computer Science (ICIPCS'2016), London, United Kingdom, 26 - 27 March 2016

**XVIII. A Novel Keypoint Based Forgery Detection Method Based on LPQ and SIFT**

Üstübioğlu B., Tahaoğlu G., Ulutaş G., Nabyev V., Ulutaş M.

"International Conference on Electrical and Electronics Engineering, ELECO 2015", Bursa, Turkey, 26 - 28 November 2015

**XIX. Online Bilişim Suçları ve Bu Suçlara Karşı Alınacak Önlemler**

Tahaoğlu G., Karabatak M.

International Symposium on Digital Forensic and Security, Elazığ, Turkey, 20 - 21 May 2013, pp.120-125

## Supported Projects

Tahaoğlu G., Ulutaş G., Üstübioğlu B., TUBITAK Project, Detection of Forgery in Digital Audios and Localization of Fraudulent Sounds, 2022 - 2024

Tahaoğlu G., Ulutaş G., TUBITAK Project, Digital image copy move forgery detection independent from attack types, 2019 - 2021

## Scientific Refereeing

IMAGING SCIENCE JOURNAL, Journal Indexed in SCI-E, April 2022

IEEE TRANSACTIONS ON DEPENDABLE AND SECURE COMPUTING, Journal Indexed in SCI-E, February 2022

IEEE ACCESS, Journal Indexed in SCI-E, August 2021

## Tasks In Event Organizations

Tahaoğlu G., International Symposium on Digital Forensic and Security, Scientific Congress, Elazığ, Turkey, Mayıs 2013

## Mobility Activity

Post Doc, Post Doc, Universita Degli Studi di Firenze, Italy, 2023 - Continues

## Metrics

Publication: 35

Citation (WoS): 99

Citation (Scopus): 173

H-Index (WoS): 7

H-Index (Scopus): 7

## **Scholarships**

2219-Yurt Dışı Doktora Sonrası Araştırma Burs Programı, TÜBİTAK, 2023 - Continues

1001 Proje bursiyeri, TÜBİTAK, 2019 - 2021