

## Asst. Prof. BESTE ÜSTÜBİOĞLU

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### International Researcher IDs

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### Research Areas

Computer Sciences, Information Security and Reliability, Information System Reliability, Engineering and Technology

### Academic Titles / Tasks

Lecturer PhD, Karadeniz Technical University, Mühendislik Fakültesi, Bilgisayar Mühendisliği, 2019 - Continues

### 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, 2024 (SCI-Expanded)
- II. **Low Dimensional Secure Federated Learning Framework Against Poisoning Attacks**  
Üstübioğlu B., Erdöl H., Ulutaş G.  
FUTURE GENERATION COMPUTER SYSTEMS, vol.1, no.1, pp.1, 2024 (SCI-Expanded)
- III. **An Attack-Independent Audio Forgery Detection Technique Based On Cochleagram Images Of Segments with Dynamic Threshold**  
ÜSTÜBİOĞLU B.  
IEEE Access, vol.12, pp.82660-82675, 2024 (SCI-Expanded)
- IV. **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)
- V. **Robust Copy-Move Forgery Detection Technique Against Image Degradation and Geometric Distortion Attacks**  
Tahaoglu G., Üstübioğlu B., Ulutaş G., Ulutaş M., Nabyev V.  
WIRELESS PERSONAL COMMUNICATIONS, vol.131, no.4, pp.2919-2947, 2023 (SCI-Expanded)
- VI. **Mel spectrogram-based audio forgery detection using CNN**  
Ustubioglu A., ÜSTÜBİOĞLU B., ULUTAŞ G.  
SIGNAL IMAGE AND VIDEO PROCESSING, vol.17, no.5, pp.2211-2219, 2023 (SCI-Expanded)
- VII. **Color Image Splicing Localization Based on Block Classification Using Transition Probability Matrix**  
ODABAŞ YILDIRIM E., TAHAOĞLU G., ULUTAŞ G., ÜSTÜBİOĞLU B., NABİYEV V.  
WIRELESS PERSONAL COMMUNICATIONS, vol.129, no.3, pp.1893-1919, 2023 (SCI-Expanded)

- VIII. **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)
- IX. **Robust copy-move detection in digital audio forensics based on pitch and modified discrete cosine transform**  
ÜSTÜBİOĞLU B., Kucukugurlu B., ULUTAŞ G.  
MULTIMEDIA TOOLS AND APPLICATIONS, vol.81, no.19, pp.27149-27185, 2022 (SCI-Expanded)
- X. **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)
- XI. **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)
- XII. **Underwater image enhancement using contrast limited adaptive histogram equalization and layered difference representation**  
ULUTAŞ G., ÜSTÜBİOĞLU B.  
MULTIMEDIA TOOLS AND APPLICATIONS, vol.80, no.10, pp.15067-15091, 2021 (SCI-Expanded)
- XIII. **IWT-MDE based reversible thermal image watermarking enhanced with secret sharing mechanism**  
ÜSTÜBİOĞLU A., ULUTAŞ G., ÜSTÜBİOĞLU B.  
MULTIMEDIA TOOLS AND APPLICATIONS, vol.78, no.16, pp.22269-22299, 2019 (SCI-Expanded)
- XIV. **Frame duplication detection based on BoW model**  
ULUTAŞ G., ÜSTÜBİOĞLU B., ULUTAŞ M., NABIYEV V.  
MULTIMEDIA SYSTEMS, vol.24, no.5, pp.549-567, 2018 (SCI-Expanded)
- XV. **Medical Image Tamper Detection Based on Passive Image Authentication**  
ULUTAŞ G., ÜSTÜBİOĞLU A., ÜSTÜBİOĞLU B., NABIYEV V., ULUTAŞ M.  
JOURNAL OF DIGITAL IMAGING, vol.30, no.6, pp.695-709, 2017 (SCI-Expanded)
- XVI. **Frame duplication/mirroring detection method with binary features**  
ULUTAŞ G., ÜSTÜBİOĞLU B., ULUTAŞ M., NABIYEV V.  
IET IMAGE PROCESSING, vol.11, no.5, pp.333-342, 2017 (SCI-Expanded)
- XVII. **Improved copy-move forgery detection based on the CLDs and colour moments**  
ÜSTÜBİOĞLU B., ULUTAŞ G., ULUTAŞ M., NABIYEV V.  
IMAGING SCIENCE JOURNAL, vol.64, no.4, pp.215-225, 2016 (SCI-Expanded)
- XVIII. **A new copy move forgery detection technique with automatic threshold determination**  
ÜSTÜBİOĞLU B., ULUTAŞ G., ULUTAŞ M., NABIYEV V.  
AEU-INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATIONS, vol.70, no.8, pp.1076-1087, 2016 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Görsel kelime tabanlı ses sahteciliği tespit yöntemi**  
Üstübioğlu B., Üstübioğlu A.  
Niğde Ömer HalisDemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.13, no.1, pp.350-358, 2024 (Peer-Reviewed Journal)
- II. **Su Altı Görüntülerinin CVC Yöntemi Kullanılarak İyileştirilmesi**  
Üstübioğlu A., Üstübioğlu B.  
Yüzüncü Yıl Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.28, no.3, pp.962-972, 2023 (Peer-Reviewed Journal)
- III. **YÜKSEK ÇÖZÜNÜRLÜKLÜ SPEKTROGRAM GÖRÜNTÜLERİNDEN AKAZE YÖNTEMİ İLE SES SAHTECİLİĞİ TESPİTİ**  
Üstübioğlu B., Tahaoglu G.

Kahramanmaraş Sütçü İmam Üniversitesi Fen ve Mühendislik Dergisi, no.26/4, pp.962-970, 2023 (Peer-Reviewed Journal)

**IV. Video forgery detection method based on local difference binary(Accepted/Kabul Tarihi: 23.01.2020)**

ULUTAŞ G., ÜSTÜBİOĞLU B., ULUTAŞ M., NABIYEV V.

Pamukkale Üniversitesi Mühendislik Bilimleri Dergisi, vol.26, pp.983-992, 2020 (ESCI)

**V. Blur Invariant Image Forgery Detection Method Using Local Phase Quantization**

ÜSTÜBİOĞLU B., BAYKAL E., MUZAFFER 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. Audio Forgery Detection Method with Mel Spectrogram**

Üstübioğlu B., Üstübioğlu A., Ulutaş G.

16. Uluslararası Bilgi Güvenliği ve Kriptoloji Konferansı-ISC Türkiye 2023., Ankara, Turkey, 18 October 2023 - 19 January 2024, pp.10-15

**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. 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

**IV. 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

**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. Block-Based Forgery Detection with Binary Gradient Model İkili Gradyan Modeli ile Blok Tabanlı Ses Sahteciliği Tespiti**

Yazıcı S., ÜSTÜBİOĞLU B., Kiliç M., ULUTAŞ G.

15th International Conference on Information Security and Cryptography, ISCTURKEY 2022, Ankara, Turkey, 19 - 20 October 2022, pp.38-43

**VII. 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

**VIII. 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

**IX. Ataklara Karşı Dayanımlı 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

**X. Duplicated Audio Segment Detection with Local Binary Pattern**

KÜÇÜKÜĞURLU B., ÜSTÜBİOĞLU B., ULUTAŞ G.

2020 43rd International Conference on Telecommunications and Signal Processing (TSP), Milan, Italy, 07 July

2020, pp.350-353

- XI. **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
- XII. **Performance Analysis in Common Color Spaces of 2D Gaussian Color Model for Skin Segmentation**  
KETENCİ S., ÜSTÜBİOĞLU B.  
IEEE Region 8 Conference EuroCon 2013, Italy, pp.1
- XIII. **Tıbbi Görüntülerin TADD-HWHD ile Damgalanması**  
ÜSTÜBİOĞLU A., ULUTAŞ G., Üstübioğlu B.  
SIU 2018, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- XIV. **Using correlation matrix to detect frame duplication forgery in videos**  
ÜSTÜBİOĞLU B., ULUTAŞ G., NABIYEV V., ULUTAŞ M., ÜSTÜBİOĞLU A.  
26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- XV. **Watermarking Medical Images with IDWT-FWHT**  
ÜSTÜBİOĞLU A., ULUTAŞ G., ÜSTÜBİOĞLU B.  
26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- XVI. **Korelasyona Dayalı Hızlı Bir Çerçeve Tekrarlama Sahteciliği Tespit Yöntemi (A Fast Detection Method for Frame Duplication Forgery based on Correlation)**  
ÜSTÜBİOĞLU B., ULUTAŞ G., NABIYEV V., ULUTAŞ M., ÜSTÜBİOĞLU A.  
2017 IEEE 25. Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Turkey, 15 - 18 May 2017
- XVII. **Tamper Localization of the Medical Images Based on Fragile Watermarking**  
ÜSTÜBİOĞLU A., ULUTAŞ G., ÜSTÜBİOĞLU B.  
25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017
- XVIII. **AKD İle Videolarda Çerçeve Tekrarlama Sahteciliği Tespiti**  
ÜSTÜBİOĞLU B., ULUTAŞ G., ULUTAŞ M., NABIYEV V.  
9. Uluslararası Bilgi Güvenliği ve Kriptoloji Konferansı, 25 - 26 October 2016
- XIX. **COLOR LAYOUT DESCRIPTOR BASED VIDEO FORGERY DETECTION**  
BOZKURT I., ULUTAŞ G., ÜSTÜBİOĞLU B., NABIYEV V.  
9. ULUSLARARASI BİLGİ GÜVENLİĞİ VE KRİPTOLOJİ KONFERANSI, Ankara, Turkey, 25 - 26 October 2016, pp.178-182
- XX. **FRAME DUPLICATION FORGERY DETECTION BY USING DCT**  
ÜSTÜBİOĞLU B., ÜSTÜBİOĞLU A., ULUTAŞ G., ULUTAŞ M., NABIYEV V.  
9. ULUSLARARASI BİLGİ GÜVENLİĞİ VE KRİPTOLOJİ KONFERANSI, Ankara, Turkey, 25 October - 26 December 2016, pp.141-144
- XXI. **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
- XXII. **A novel keypoint based forgery detection method based on local phase quantization and SIFT**  
ÜSTÜBİOĞLU B., MUZAFFER G., ULUTAŞ G., NABIYEV V., ULUTAŞ M.  
9th International Conference on Electrical and Electronics Engineering, ELECO 2015, Bursa, Turkey, 26 - 28 November 2015, pp.185-189
- XXIII. **LBP-DCT Based Copy Move Forgery Detection Algorithm**  
Ustubioglu B., Ulutas G., Ulutas M., Nabyev V., Ustubioglu A.  
30th International Symposium on Computer and Information Sciences (ISCIS), London, Canada, 21 - 24 September 2015, vol.363, pp.127-136
- XXIV. **Image Forgery Detection based on SIFT and k-means plus**  
BAYKAL KABLAN E., ÜSTÜBİOĞLU B., ULUTAŞ G.  
39th International Conference on Telecommunications and Signal Processing (TSP), Vienna, Austria, 27 - 29 June 2016, pp.474-477

- XXV. **A Novel Keypoint Based Forgery Detection Method Based on LPQ and SIFT**  
Üstübioğlu B., Tahaoğlu G., Ulutaş G., NABIYEV V., Ulutaş M.  
"International Conference on Electrical and Electronics Engineering, ELECO 2015", Bursa, Turkey, 26 - 28 November 2015
- XXVI. **Enerji Olasılık Değerlerini Kullanan Görüntü Sahtecilik Tespit Yöntemi**  
ÜSTÜBİOĞLU B., ULUTAŞ G., NABIYEV V., ULUTAŞ M.  
IEEE 23. Sinyal İşleme ve İletişim Uygulamaları Kurultayı, 16 May 2015
- XXVII. **Renkli SIFT Tabanlı Görüntü Sahtecilik Tespit Yöntemi**  
ÜSTÜBİOĞLU B., AYAS S., DOĞAN H., ULUTAŞ G.  
IEEE 23. Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Malatya, Turkey, 16 - 19 May 2015, pp.1-4
- XXVIII. **Image Forgery Detection Using Colour Moments**  
ÜSTÜBİOĞLU B., NABIYEV V., ULUTAŞ G., ULUTAŞ M.  
38th International Conference on Telecommunications and Signal Processing (TSP), Prague, Czech Republic, 9 - 11 July 2015, pp.540-544
- XXIX. **Image Forgery Detection based on Energy Probability**  
ÜSTÜBİOĞLU B., ULUTAŞ G., NABIYEV V., ULUTAŞ M.  
23rd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015, pp.919-922
- XXX. **Jpeg Ataklara Dayanıklı Hibrit Görüntü Doğrulama Yaklaşımı**  
ÜSTÜBİOĞLU B., NABIYEV V., ULUTAŞ G., ULUTAŞ M.  
IEEE 22nd Signal Processing and Communications Applications Conference (SIU 2014), 23 - 25 April 2014
- XXXI. **Performance Analysis in Common Color Spaces of 2D Gaussian Color Model for Skin Segmentation**  
KETENCİ S., ÜSTÜBİOĞLU B.  
IEEE Region 8 Conference EuroCon 2013, Roma, Italy, 1 - 04 July 2013
- XXXII. **Yüz Benzerliğinin Otomatik Tespiti**  
ÜSTÜBİOĞLU B., NABIYEV V., ÜSTÜBİOĞLU A.  
5. Mühendislik ve Teknoloji Sempozyumu, 2012., Ankara, Turkey, 26 - 27 April 2012, pp.60-62
- XXXIII. **Similarity assessment with local binary patterns**  
NABIYEV V., ÜSTÜBİOĞLU B.  
Signal Processing and Communications Applications Conference (SIU), Ankara, Turkey, 18 - 20 April 2012, pp.1-4
- XXXIV. **Biyometrik Görüntülerin Ağ Üzerinden Güvenli Şekilde İletilmesi**  
ÜSTÜBİOĞLU B., NABIYEV V., ÜSTÜBİOĞLU A.  
Çankaya Üniversitesi 4. Mühendislik ve Teknoloji Sempozyumu, Ankara, Turkey, 28 - 29 April 2011, pp.50-52
- XXXV. **A novel keypoint based forgery detection method based on local phase quantization and SIFT**  
ÜSTÜBİOĞLU B., MUZAFFER G., ULUTAŞ G., NABIYEV V., ULUTAŞ M.  
ELECO 2015 - 9th International Conference on Electrical and Electronics Engineering, IEEE, Bursa, Turkey, 26 - 28 October 2015, pp.185-189

## Supported Projects

ULUTAŞ G., TUBITAK Project, Pasif Video Doğrulama Sistemi, 2015 - 2017

## Metrics

Publication: 60

Citation (WoS): 179

Citation (Scopus): 243

H-Index (WoS): 8

H-Index (Scopus): 9

## Scholarships

Teknoloji Liderleri Lisansüstü Burs Programı, Special Institutions and Organizations, 2011 - Continues