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International Researcher IDs

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Education Information

Doctorate, Kocaeli University, Fen Bilimleri Enstitüsü, Elektronik Ve Haberleşme Mühendisliği (Dr), Turkey 2007 - 2014

Postgraduate, Kocaeli University, Fen Bilimleri Enstitüsü, Elektronik Ve Haberleşme Mühendisliği (YI) (Tezli), Turkey 2005 - 2007

Undergraduate, Kocaeli University, Mühendislik Fakültesi, Elektronik Ve Haberleşme Mühendisliği Bölümü, Turkey 2001 - 2005

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Video için bölgesel ortak değişim betimleyici tabanlı iyileştirilmiş hedef takibi, Kocaeli Üniversitesi, Fen Bilimleri Enstitüsü, Elektronik Ve Haberleşme Mühendisliği (Dr), 2014

Postgraduate, Bir-bit dönüşümü temelli blok hareket kestirimlerinin H.264/AVC'ye uygulanması, Kocaeli Üniversitesi, Fen Bilimleri Enstitüsü, Elektronik Ve Haberleşme Mühendisliği (YI) (Tezli), 2007

Research Areas

Engineering and Technology

Academic Titles / Tasks

Associate Professor, Kocaeli University, Mühendislik Fakültesi, Bilgisayar Mühendisliği, 2020 - Continues

Assistant Professor, Kocaeli University, Mühendislik Fakültesi, Bilgisayar Mühendisliği, 2014 - 2020

Published journal articles indexed by SCI, SSCI, and AHCI

- I. SIMD-based low bit-depth motion estimation with application to HEVC

- DUVAR R., KÜÇÜKMANİSA A., AKBULUT O., Celebi A., URHAN O.
SIGNAL IMAGE AND VIDEO PROCESSING, vol.17, no.4, pp.1449-1456, 2023 (SCI-Expanded)
- II. **Improved intra-subpartition coding mode for versatile video coding**
AKBULUT O., KONYAR M. Z.
SIGNAL IMAGE AND VIDEO PROCESSING, vol.16, no.5, pp.1363-1368, 2022 (SCI-Expanded)
- III. **A new perspective on decolorization: feature-preserving decolorization**
AKBULUT O.
SIGNAL IMAGE AND VIDEO PROCESSING, vol.15, no.3, pp.645-653, 2021 (SCI-Expanded)
- IV. **Matrix encoding-based high-capacity and high-fidelity reversible data hiding in HEVC**
KONYAR M. Z., AKBULUT O., ÖZTÜRK S.
SIGNAL IMAGE AND VIDEO PROCESSING, vol.14, no.5, pp.897-905, 2020 (SCI-Expanded)
- V. **Fast inter mode decision exploiting intra-block similarity in HEVC**
Duvar R., AKBULUT O., URHAN O.
SIGNAL PROCESSING-IMAGE COMMUNICATION, vol.78, pp.503-510, 2019 (SCI-Expanded)
- VI. **Robust and real-time lane detection filter based on adaptive neuro-fuzzy inference system**
KÜÇÜKMANİSA A., AKBULUT O., URHAN O.
IET IMAGE PROCESSING, vol.13, no.7, pp.1181-1190, 2019 (SCI-Expanded)
- VII. **IFIT: an unsupervised discretization method based on the Ramer-Douglas-Peucker algorithm**
Mutlu A., Göz F., Akbulut O.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.27, no.3, pp.2344-2360, 2019 (SCI-Expanded)
- VIII. **Assessment of the performance of low Bit-Depth representation based motion estimation methods on HEVC**
Duvar R., KÜÇÜKMANİSA A., AKBULUT O., Celebi A., URHAN O.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.34, no.2, pp.786-799, 2019 (SCI-Expanded)
- IX. **Truncated Gray-Coded Bit-Plane Matching Based Motion Estimation and its Hardware Architecture**
ÇELEBİ A., AKBULUT O., URHAN O., Ertuerk S.
IEEE TRANSACTIONS ON CONSUMER ELECTRONICS, vol.55, no.3, pp.1530-1536, 2009 (SCI-Expanded)
- X. **An All Binary Sub-Pixel Motion Estimation Approach and its Hardware Architecture**
ÇELEBİ A., AKBULUT O., URHAN O., Hamzaoglu I., ERTUERK S.
IEEE TRANSACTIONS ON CONSUMER ELECTRONICS, vol.54, no.4, pp.1928-1937, 2008 (SCI-Expanded)
- XI. **One-dimensional processing for efficient optimal post-process/in-loop filtering in video coding**
AKBULUT O., URHAN O., ERTÜRK S., CHANG T.
IEEE TRANSACTIONS ON CONSUMER ELECTRONICS, vol.54, no.3, pp.1346-1354, 2008 (SCI-Expanded)
- XII. **Improved block motion estimation using block frequency warping**
AKBULUT O., URHAN O., ERTUERK S.
IEEE SIGNAL PROCESSING LETTERS, vol.15, pp.143-145, 2008 (SCI-Expanded)

Articles Published in Other Journals

- I. **A Low-Dimensional Feature Vector Representation for Gait-based Parkinson's Disease Detection**
Ölmez E., Akbulut O., Sertbaş A.
Kocaeli Journal of Science and Engineering, vol.6, no.1, pp.35-43, 2023 (Peer-Reviewed Journal)
- II. **Feature Normalization Effect in Emotion Classification based on EEG Signals**
AKBULUT O.
Sakarya University Journal of Science, pp.60-66, 2020 (Peer-Reviewed Journal)
- III. **Görüntü İşleme ile TFT/LCD Panellerde Kalite Kontrolü**
Taşyapı Çelebi A., Akbulut O., Ertürk A., Urhan O., Güllü M. K., Ertürk S.
Otomasyon, vol.243, 2012 (Non Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **A Lightweight Image Decolorization Approach based on Contrast Preservation**
GÖRMEZ D., AKBULUT O.
The International Conference on Digital Image Computing: Techniques and Applications (DICTA 2022), Sydney, Australia, 30 November - 02 December 2022
- II. **EEG Sinyallerini Kullanarak Çoklu Sınıflandırma tabanlı Duygu Tanımada Aşırı Öğrenme Makinelerinin Rolü**
Erat K., ONAY DURDU P., AKBULUT O.
Akıllı Sistemlerde Yenilikler ve Uygulamaları Konferansı 2019, İzmir, Turkey, 31 October - 02 November 2019
- III. **A comparative Study on Decolorization Methods**
ÇİMEN G., AKBULUT O.
10th International Conference on Image Processing, Wavelet and Applications (IWW2019, 18 - 20 October 2019
- IV. **İmleç Hareketlerinden Kullanıcı Cinsiyetinin Makine Öğrenmesi tabanlı Tespiti**
SAYILIR E., AKBULUT O.
International Marmara Sciences Congress, 1 - 03 November 2019
- V. **Elektroansefalografi Sinyalleri ile Farklı Senaryolarda Epilepsi Nöbet Tespiti**
KEÇELİ H., AKBULUT O., UÇAR M. K.
International Marmara Sciences Congress, Kocaeli, Turkey, 1 - 03 November 2019, pp.364-370
- VI. **Performance Comparison of EEG Channels in Emotion Recognition**
KUL S., ONAY DURDU P., AKBULUT O.
27th Signal Processing and Communications Applications Conference (SIU), Sivas, Turkey, 24 - 26 April 2019
- VII. **HEVC'de Matris Kodlama Tabanlı Veri Gizleme**
KONYAR M. Z., AKBULUT O., ÖZTÜRK S.
3. Uluslararası Bilgisayar Bilimleri ve Mühendisliği Konferansı, 20 - 23 September 2018, pp.662-665
- VIII. **Real-Time Lane Marking Detection Using Weighted Filter**
KÜÇÜKMANİSA A., AKBULUT O., URHAN O.
20th International Conference on Computer Sciences, Computational and Artificial Intelligence, 30 - 31 August 2018
- IX. **Analysis of Ramer-Douglas-Peucker algorithm as a discretization method Ramer Douglas Peucker algoritmasının ayırıklaştırma yöntemi olarak analizi**
GÖZ F., MUTLU A., AKBULUT O.
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- X. **Performance analysis of one-bit transform based motion estimation using sparse search on HEVC HEVC'de seyrek arama kullanarak bir-bit dönüşümlü hareket kestiriminin performans analizi**
DUVAR R., KÜÇÜKMANİSA A., AKBULUT O., CELEBI A., URHAN O.
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Turkey, 2 - 05 May 2018, pp.1-4
- XI. **HEVC'de Seyrek Arama Kullanarak Bir-Bit Dönüşümlü Hareket Kestiriminin Performans Analizi**
DUVAR R., KÜÇÜKMANİSA A., AKBULUT O., TAŞYAPI ÇELEBİ A., URHAN O.
26. IEEE Sinyal İşleme ve İletişim Uygulamaları Kurultayı (SİU'2018), 2 - 05 May 2018
- XII. **Matrix Encoding Based Data Hiding in HEVC**
KONYAR M. Z., AKBULUT O., ÖZTÜRK S.
3rd International Conference on Computer Science and Engineering (UBMK), Sarajevo, Bosnia And Herzegovina, 20 - 23 September 2018, pp.662-665
- XIII. **Analysis of Ramer-Douglas-Peucker Algorithm As a Discretization Method**
GÖZ F., MUTLU A., AKBULUT O.
26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018
- XIV. **Performance Analysis of One-Bit Transform based Motion Estimation using Sparse Search on HEVC**
DUVAR R., KÜÇÜKMANİSA A., AKBULUT O., TAŞYAPI ÇELEBİ A., URHAN O.
26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Turkey, 2 - 05 May 2018

- XV. **Implementation of 1 -bit transform based motion estimation to HEVC encoder**
DUVAR R., KÜÇÜKMANİSA A., AKBULUT O., TAŞYAPI ÇELEBİ A., URHAN O.
2017 25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, Turkey, 15 - 18 May 2017
- XVI. **Multi band pass filter based one-bit transforms in motion estimation Hareket Kestiriminde Çoklu Bant Geçiren Süzgeç tabanlı Bir Bit Dönüşümleri**
AKBULUT O., Duvar R., KÜÇÜKMANİSA A., URHAN O.
25th Signal Processing and Communications Applications Conference, SIU 2017, Antalya, Turkey, 15 - 18 May 2017
- XVII. **Multi Band Pass Filter based One-Bit Transforms in Motion Estimation**
AKBULUT O., Duvar R., KÜÇÜKMANİSA A., URHAN O.
25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017
- XVIII. **Kinect Sensor based Physiotherapy Management**
Topuz B., Ozuag E., AKBULUT O.
24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.2209-2212
- XIX. **Enhanced Video Target Tracking using Kalman Filter Guided Covariance Descriptor with Gaussian Similarity Weighting**
AKBULUT O., ERTÜRK S.
Int'l Conf. IP, Comp. Vision, and Pattern Recognition IPCV 2015, 27 - 31 July 2015
- XX. **Kesik Gri Kodlanmış Bit Düzlemi Uyumlama Temelli Hareket Kestiriminin HEVC ye Uygulanması**
AKBULUT O., TAŞYAPI ÇELEBİ A., URHAN O.
Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Turkey, 16 - 19 May 2015
- XXI. **Implementation of Truncated Gray-Coded Bit-Plane Matching Based Motion Estimation to HEVC**
AKBULUT O., CELEBI A., Urhan O.
23rd Signal Processing and Communications Applications Conference (SIU), Malatya, Turkey, 16 - 19 May 2015, pp.2230-2233
- XXII. **A Probabilistic Approach For Fast Covariance Descriptor**
AKBULUT O., ERTÜRK S.
22nd IEEE Signal Processing and Communications Applications Conference (SIU), Trabzon, Turkey, 23 - 25 April 2014, pp.2166-2169
- XXIII. **İyileştirilmiş Benzerlik Kriteri Kullanarak Bölgesel Ortak Değişinti Betimleyici Tabanlı Olasılıksal Nesne Takibi**
AKBULUT O., URHAN O., ERTÜRK S.
21st Signal Processing and Communications Applications Conference (SIU), 24 - 26 April 2013
- XXIV. **Region Covariance Descriptor Based Probabilistic Object Tracking using Enhanced Similarity Criterion**
AKBULUT O., URHAN O., ERTÜRK S.
21st Signal Processing and Communications Applications Conference (SIU), CYPRUS, 24 - 26 April 2013
- XXV. **NEAR OPTIMAL IN-LOOP/POST FILTERING FOR REAL TIME VIDEO CODING APPLICATIONS**
AKBULUT O., URHAN O., ERTÜRK S.
IEEE 17th Signal Processing and Communications Applications Conference, Antalya, Turkey, 9 - 11 April 2009, pp.834-837
- XXVI. **Truncated Gray-Coded Bit-Plane Matching Based Motion Estimation and its Hardware Architecture**
ÇELEBİ A., AKBULUT O., URHAN O., ERTÜRK S.
IEEE 17th Signal Processing and Communications Applications Conference, Antalya, Turkey, 9 - 11 April 2009, pp.906-909
- XXVII. **ONE-DIMENSIONAL FILTERING AND FILTER COEFFICIENT COMPRESSION FOR OPTIMAL POST-PROCESS/IN-LOOP FILTER COEFFICIENT**
AKBULUT O., Ertuerk S.
IEEE 16th Signal Processing and Communications Applications Conference, Aydın, Turkey, 20 - 22 April 2008, pp.653-656

- XXVIII. **Multiplication-free one-bit transform based block motion estimation applied to H.264/AVC**
AKBULUT O., URHAN O., Ertuerk S.
IEEE 15th Signal Processing and Communications Applications Conference, Eskişehir, Turkey, 11 - 13 June 2007, pp.1099-1102
- XXIX. **Enhanced block motion estimation based on frequency warping**
AKBULUT O., URHAN O., ERTÜRK S.
IEEE 15th Signal Processing and Communications Applications Conference, Eskişehir, Turkey, 11 - 13 June 2007, pp.1035-1037
- XXX. **Fast sub-pixel motion estimation via one-bit transform**
AKBULUT O., URHAN O., ERTÜRK S.
IEEE 14th Signal Processing and Communications Applications, Antalya, Turkey, 16 - 19 April 2006, pp.710-711
- XXXI. **Fast sub-pixel motion estimation by means of one-bit transform**
AKBULUT O., URHAN O., ERTÜRK S.
21st International Symposium on Computer and Information Sciences (ISCIS 2006), İstanbul, Turkey, 1 - 03 November 2006, vol.4263, pp.503-505

Expert Reports

- I. **Yayın Hakemliği Renkli gradyan tabanlı yeni bir öznelilik çıkarmayöntemi**
AKBULUT O.
2015

Metrics

Publication: 49
Citation (WoS): 100
Citation (Scopus): 131
H-Index (WoS): 5
H-Index (Scopus): 6