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Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Elektronik Mühendisliği, Turkey 2015 - Continues
Doctorate, Université Catholique de Louvain, Institute of Information and Communication Technologies, Electronics and Applied Mathematics (ICTEAM), Belgium 2018 - 2019
Postgraduate, Anadolu University, Instıtute Of Scıence, Bilgisayar Mühendisliği, Turkey 2013 - 2016
Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Elektronik Mühendisliği, Turkey 2013 - 2015
Undergraduate Double Major, Eskisehir Osmangazi University, Mühendislik - Mimarlık Fakültesi, Bilgisayar Mühendisliği, Turkey 2010 - 2013
Undergraduate, Eskisehir Osmangazi University, Mühendislik - Mimarlık Fakültesi, Elektrik - Elektronik Mühendisliği, Turkey 2007 - 2013

Foreign Languages

French, B1 Intermediate
English, C1 Advanced

Dissertations

Postgraduate, Çoklu biyometrik sistem tasarımı, Anadolu University, Instıtute Of Scıence, 2016
Postgraduate, Smart card and biometric based general purpose access control system design, Istanbul Technical University, Fen Bilimleri Enstitüsü, 2015

Research Areas

Computer Sciences, Equipment, Engineering and Technology

Academic Titles / Tasks

Research Assistant, Yildiz Technical University, Faculty Of Electrical & Electronics, Computer Engineering, 2014 -

Continues

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Utilization of Contingency Tables in Stochastic Computing**
Aygun S., Güneş E. O.
IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS II-EXPRESS BRIEFS, vol.69, no.6, pp.2942-2946, 2022 (SCI-Expanded)

II. **Experimental interpretation of adequate weight-metric combination for dynamic user-based collaborative filtering**
OKYAY S., AYGÜN S.
PEERJ COMPUTER SCIENCE, vol.7, 2021 (SCI-Expanded)

III. **Efficient and robust bitstream processing in binarised neural networks**
Aygun S., Güneş E. O., De Vleeschouwer C.
ELECTRONICS LETTERS, vol.57, no.5, pp.219-222, 2021 (SCI-Expanded)

Articles Published in Other Journals

I. **On the Limit of Multiplexers in Stochastic Computing**
Aygün S., Güneş E. O.
International Journal of Multidisciplinary Studies and Innovative Technologies, vol.5, no.1, pp.94-97, 2021 (Peer-Reviewed Journal)

II. **The Implementation of DCGAN in the Data Augmentation for the Sperm Morphology Datasets**
Balayev K., Guluzade N., AYGÜN S., İLHAN H. O.
European Journal of Science and Technology, vol.0, pp.307-314, 2021 (Peer-Reviewed Journal)

III. **A Study of Static and Dynamic Significance Weighting Multipliers on the Pearson Correlation for Collaborative Filtering**
Okyay S., Aygün S.
European Journal of Science and Technology, no.Special Issue, pp.270-275, 2020 (Peer-Reviewed Journal)

IV. **1.5 Bit/Stage, 12-Bit Pipeline ADC Design with Foreground Calibration**
Aygün S., Kouhalvandi L., Güneş E. O.
International Journal of Advancements in Electronics & Electrical Engineering, vol.7, no.1, pp.164-168, 2018 (Conference Book)

V. **Bulut Sistemleri İçin Biyometrik Tabanlı Güvenlik Sistemleri**
Aygün S., Akçay M., Güneş E. O.
Uluslararası Bilgi Güvenliği Mühendisliği Dergisi, vol.2, no.1, pp.15-21, 2016 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. **On the Simulation of Software-Driven Stochastic Computing for Emerging Applications**
Aygün S., Güneş E. O.
Design, Automation and Test in Europe Conference (DATE), SCONA Workshop, Grenoble, France, 13 March 2020, pp.1-2

II. **Inspecting Distortion in the Power Amplifiers with the aid of Neural Networks**
Aygun S., Kouhalvandi L., Güneş E. O., Ozoguz S.
22nd IEEE International Conference on Advanced Communication Technology (ICACT), Pyeongyang, North Korea, 16 - 19 February 2020, pp.448-453

III. **Sensor Fusion for IoT-based Intelligent Agriculture System**

Aygün S., Güneş E. O., Subaşı M. A., Alkan S.
The Eighth International Conference on Agro-Geoinformatics, İstanbul, Turkey, 16 - 19 July 2019, pp.1-5

IV. **Less Data for Face and Iris Biometric Traits: An Approximation for Feature Extraction**
AYGÜN S., Çavuş G., Güneş E. O.
6th IEEE Workshop on Advances in Information, Electronic and Electrical Engineering, Vilnius, Lithuania, 08 November 2018, pp.1-4

V. **Karatsuba Ofman Multiplication Implementation on SystemC for Diffie-Hellman Key Exchange Algorithm**
AYGÜN S., Kouhalvandi L., Örs Yalçın S. B., Güneş E. O.
4th International Conference on Knowledge-Based Engineering and Innovation (KBEI-2017), Tahran, Iran, 22 December 2017, pp.1-5

VI. **1.5 Bit/Stage, 12-Bit Pipeline ADC Design with Foreground Calibration**
AYGÜN S., KOUHALVANDİ L., GÜNEŞ E. O.
The Sixth International Conference on Advances in Computing, Electronics and Communication - ACEC 2017, Roma, Italy, 9 - 10 December 2017, pp.1-5

VII. **Design of a High Gain Telescopic-Cascode Operational Amplifier Based on the ZTC Operation Condition**
Kouhalvandi L., AYGÜN S., Güneş E. O., Kırcı M.
24th IEEE International Conference on Electronics, Circuits and Systems (ICECS), Batum, Georgia, 05 December 2017, pp.1-4

VIII. **An Improved 2 Stage Opamp with Rail-to-Rail Gain-Boosted Folded Cascode Input Stage and Monticelli Rail-to-Rail Class AB Output Stage**
Kouhalvandi L., AYGÜN S., Güneş E. O., Kırcı M.
24th IEEE International Conference on Electronics, Circuits and Systems (ICECS), Batum, Georgia, 05 December 2017, pp.1-4

IX. **10-bit High-Speed CMOS Comparator with Offset Cancellation Technique**
Kouhalvandi L., AYGÜN S., Özdemir G. G., Güneş E. O.
The 5th IEEE Workshop on Advances in Information, Electronic and Electrical Engineering, Riga, Latvia, 24 November 2017, pp.1-4

X. **Design of a Fully-Differential Double Folded Cascode Class AB Opamp with Continuous Time Common Mode Feedback Network for 12-bit Pipeline ADC Applications**
Kouhalvandi L., AYGÜN S., Güneş E. O.
Uluslararası Bilgisayar Bilimleri ve Mühendisliği Konferansı UBMK 2017, Antalya, Turkey, 05 October 2017, pp.1-5

XI. **A benchmarking: Feature extraction and classification of agricultural textures using LBP, GLCM, RBO, Neural Networks, k-NN, and random forest**
AYGÜN S., Güneş E. O.
6th International Conference on Agro-Geoinformatics, Washington Dc, United States Of America, 07 August 2017, pp.1-5

XII. **Growth monitoring of plants using active contour technique**
Güneş E. O., AYGÜN S.
6th International Conference on Agro-Geoinformatics, Washington Dc, United States Of America, 07 August 2017, pp.6-10

XIII. **Sobel filter operation in image processing via stochastic arithmetic-logic unit design Stokastik Aritmetik-Lojik Birim Tasarimi ile Görüntü İşlemede Sobel Filtre Operasyonu**
AYGÜN S., ALTUN M., GÜNEŞ E. O.
25th Signal Processing and Communications Applications Conference, SIU 2017, Antalya, Turkey, 15 - 18 May 2017

XIV. **Seed texture classification by random forest and neural networks**
AYGÜN S., YALÇIN H., GÜNEŞ E. O.
Signal Processing and Communications Applications Conference (SIU), 2017 25th, Antalya, Turkey, 15 - 18 May 2017, pp.1-4

XV. **Stokastik Aritmetik-Lojik Birim Tasarımı ile Görüntü İşlemede Sobel Filtre Operasyonu**

AYGÜN S., Altun M., Güneş E. O.
25. Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Antalya, Turkey, 15 May 2017, vol.1, no.1, pp.5-8

XVI. **Rasgele Orman ve Sinir Ağları ile Tohum Dokusunun Sınıflandırılması**
AYGÜN S., Yalçın H., Güneş E. O.
25. Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Antalya, Turkey, 15 May 2017, vol.1, no.1, pp.1-4

XVII. **Sobel Filter Operation in Image Processing via Stochastic Arithmetic-Logic Unit Design**
Aygun S., Altun M., Güneş E. O.
25th Signal Processing and Communications Applications Conference (SIU), Antalya, Turkey, 15 - 18 May 2017

XVIII. **An Improved 2 Stage Opamp with Rail-to-Rail Gain-Boosted Folded Cascode Input Stage and Monticelli Rail-to-Rail Class AB Output Stage**
Kouhalvandi L., Aygun S., Güneş E. O., Kırcı M.
24th IEEE International Conference on Electronics, Circuits and Systems (ICECS), Batumi, Georgia, 5 - 08 December 2017, pp.542-545

XIX. **Python based parallel application of Knuth-Morris-Pratt algorithm**
AYGÜN S., Kouhalvandi L., Güneş E. O.
4th Workshop on Advances in Information, Electronic and Electrical Engineering (AIEEE), Vilnius, Lithuania, 10 November 2016, pp.1-5

XX. **Recognition of Apple and Orange Fruit Pictures Based on Boundary Estimation**
Kouhalvandi L., Cılasun M. H., AYGÜN S.
ICEEC, 01 September 2016

XXI. **Design of an Embedded System for Automatically Determination of the Varieties of Wheat Seeds Grown in Turkey Based on Image Analysis**
AYGÜN S., Güneş E. O.
Agro-Geoinformatics 2016, 01 July 2016

XXII. **Computer Vision Techniques for Automatic Determination of Yield Effective Bad Condition Storage Effects on Various Agricultural Seed Types**
AYGÜN S., Güneş E. O.
01 July 2016

XXIII. **Yüz Tanıma Teknolojilerinde Yüksek Başarım için Paralel Hesaplama**
AYGÜN S., AKÇAY M.
4. Ulusal Yüksek Başarımlı Hesaplama Konferansı 2015, Turkey, 1 - 02 October 2015

XXIV. **Multibiometrics Approach on Biometric Passport Pictures by Using Fingerprint Minutiae Points**
AYGÜN S., Akcay M.
4th International Symposium on Digital Forensic and Security (ISDFS), Arkansas, United States Of America, 25 - 27 April 2016, pp.89-94

XXV. **Improving the pearson similarity equation for recommender systems by age parameter**
AYGÜN S., Okyay S.
Advances in Information, Electronic and Electrical Engineering, 01 November 2015

XXVI. **Securing Biometric Face Images via Steganography for QR Code**
AYGÜN S., Akçay M.
8th International Conference on Information Security & Cryptology (8. Uluslararası Bilgi Güvenliği ve Kriptoloji Konferansı), 01 October 2015

XXVII. **Matlab paralel hesaplama aracı ile A algoritmasının rota planlama için analizi**
AYGÜN S., AKÇAY M.
GENÇ MÜHENDİSLER SEMPOZYUMU 2015. Türk Mühendisler Birliği., Turkey, 14 - 15 May 2015

XXVIII. **Bulut Sistemler için Önerilen Biyometri Tabanlı Güvenlik Sistemine Genel Bakış**
AYGÜN S., Akçay M., Güneş E. O.
The Third International Symposium on Digital Forensics and Security (ISDFS 2015), 01 May 2015

XXIX. **Determination of the varieties and characteristics of wheat seeds grown in Turkey using image processing techniques**
Güneş E. O., Aygun S., Kırcı M., Kalateh A., Çakır Y.

2014 3rd International Conference on Agro-Geoinformatics, Agro-Geoinformatics 2014, Beijing, China, 11 - 14 August 2014

Other Publications

I. **Çoklu Biyometrik Sistem Tasarımı**
AYGÜN S.
Other, pp.99, 2016

II. **Smart Card And Biometric Based general Purpose Access Control System Design**
AYGÜN S.
Other, pp.91, 2015

Supported Projects

AYGÜN S., Project Supported by Other Official Institutions, RF Vericiler için Sayısal Ön-Bozucu Tasarımı, 2018 - Continues
AYGÜN S., Other International Funding Programs, Akıllı kart ve biyometrik tabanlı genel amaçlı erişim kontrolü sistemi tasarımı (İTÜ), 2014 - 2015

Scientific Refereeing

APPLIED SOFT COMPUTING JOURNAL, Journal Indexed in SCI-E, September 2022
IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS, Journal Indexed in SCI-E, August 2022
APPLIED SOFT COMPUTING JOURNAL, Journal Indexed in SCI-E, August 2022
APPLIED SOFT COMPUTING JOURNAL, Journal Indexed in SCI-E, August 2022
IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS, Journal Indexed in SCI-E, August 2022
APPLIED SOFT COMPUTING JOURNAL, Journal Indexed in SCI-E, July 2022
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IEEE JOURNAL ON EMERGING AND SELECTED TOPICS IN CIRCUITS AND SYSTEMS, Journal Indexed in SCI-E, July 2022
IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS, Journal Indexed in SCI-E, June 2022
APPLIED SOFT COMPUTING JOURNAL, Journal Indexed in SCI-E, June 2022
APPLIED SOFT COMPUTING JOURNAL, Journal Indexed in SCI-E, June 2022
APPLIED SOFT COMPUTING JOURNAL, Journal Indexed in SCI-E, May 2022
IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS, Journal Indexed in SCI-E, May 2022
ELECTRONICS LETTERS, Journal Indexed in SCI-E, May 2022
IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS, Journal Indexed in SCI-E, May 2022
IEEE SENSORS JOURNAL, Journal Indexed in SCI-E, April 2022
APPLIED SOFT COMPUTING JOURNAL, Journal Indexed in SCI-E, April 2022
IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS, Journal Indexed in SCI-E, March 2022
IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS, Journal Indexed in SCI-E, March 2022
APPLIED SOFT COMPUTING JOURNAL, Journal Indexed in SCI-E, March 2022
APPLIED SOFT COMPUTING JOURNAL, Journal Indexed in SCI-E, February 2022
IEEE SENSORS JOURNAL, Journal Indexed in SCI-E, February 2022
TEHNICKI VJESNIK, Journal Indexed in SCI-E, February 2022
IEEE SENSORS JOURNAL, Journal Indexed in SCI-E, December 2021
IEEE ACCESS, Journal Indexed in SCI-E, December 2021
IEEE ACCESS, Journal Indexed in SCI-E, December 2021
IEEE ACCESS, Journal Indexed in SCI-E, October 2021
WIRELESS COMMUNICATIONS AND MOBILE COMPUTING, Journal Indexed in SCI-E, September 2021

TEHNICKI VJESNIK-TECHNICAL GAZETTE, Journal Indexed in SCI-E, September 2021
IEEE ACCESS, Journal Indexed in SCI-E, September 2021
ELECTRONICS LETTERS, Journal Indexed in SCI-E, August 2021
ELECTRONICS LETTERS, Journal Indexed in SCI-E, August 2021
ELECTRONICS LETTERS, Journal Indexed in SCI-E, June 2021
PEERJ COMPUTER SCIENCE, Journal Indexed in SCI-E, May 2021
TEHNICKI VJESNIK-TECHNICAL GAZETTE, Journal Indexed in SCI-E, March 2021
APPLIED SOFT COMPUTING JOURNAL, Journal Indexed in SCI-E, November 2020
APPLIED SOFT COMPUTING, Journal Indexed in SCI-E, October 2020
APPLIED SOFT COMPUTING, Journal Indexed in SCI-E, October 2020
IEEE ACCESS, Journal Indexed in SCI-E, April 2020
APPLIED SOFT COMPUTING, Journal Indexed in SCI-E, February 2020
IEEE ACCESS, Journal Indexed in SCI-E, January 2020
IEEE ACCESS, Journal Indexed in SCI-E, November 2019
JOURNAL OF AGRICULTURAL SCIENCE AND TECHNOLOGY, Journal Indexed in SCI-E, November 2015

Metrics

Publication: 39
Citation (WoS): 7
Citation (Scopus): 22
H-Index (WoS): 2
H-Index (Scopus): 2